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AN

The Economic and Budget Outlook

UPDATE



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**THE ECONOMIC AND BUDGET OUTLOOK:
AN UPDATE**

The Congress of the United States
Congressional Budget Office

NOTES

Unless otherwise indicated, all years referred to in Chapter 1 are calendar years and all years in Chapter 2 are fiscal years.

Some figures in this report indicate periods of recession by using shaded vertical bars. The bars extend from the peak to the trough of the recession.

Unemployment rates throughout the report are calculated on the basis of the civilian labor force.

Numbers in the text and tables may not add to totals because of rounding.

National income and product accounts (NIPA) data shown in the tables incorporate the revised data for calendar years 1993 through 1996 and the first two quarters of 1997 that were released on July 31, 1997.

Preface

This volume is one of a series of reports on the state of the economy and the budget that the Congressional Budget Office (CBO) issues each year. It satisfies the requirement of section 202(e) of the Congressional Budget Act of 1974 that CBO submit periodic reports to the Committees on the Budget with respect to fiscal policy. In accordance with CBO's mandate to provide objective and impartial analysis, the report contains no recommendations.

The analysis of the economic outlook presented in Chapter 1 was prepared by the Macroeconomic Analysis Division under the direction of Robert Dennis and John F. Peterson. Ed Gamber wrote the chapter, with assistance from Robert Arnold. Matthew Salomon carried out the economic forecast and projections. Sandra Cannon, Douglas Hamilton, Juann Hung, Kim Kowalewski, Joyce Manchester, Angelo Mascaro, Benjamin Page, Frank Russek, Kent Smetters, John Sturrock, Jan Walliser, and Christopher Williams provided comments and background analysis. Ken Fears, Timothy Lasocki, and Michael Simpson provided research assistance.

The baseline outlay projections were prepared by the staff of the Budget Analysis Division under the supervision of Paul N. Van de Water, Robert Sunshine, Priscilla Aycock, Paul Cullinan, Peter Fontaine, James Horney, Michael Miller, and Murray Ross. The revenue estimates were prepared by the staff of the Tax Analysis Division under the supervision of Rosemary D. Marcuss and Richard Kasten. The estimates of the revenue effects of enacted legislation were provided by the Joint Committee on Taxation. Jeffrey Holland wrote Chapter 2. Matthew Salomon wrote Appendix A, and John F. Peterson wrote Appendix B. Dan Kowalski wrote Appendix C, with assistance from Jennifer Winkler. The principal contributors to the revenue and spending estimates and analyses are listed in Appendix D. Dan Kowalski also wrote the summary of the report.

At a recent meeting, CBO's Panel of Economic Advisers discussed an early version of the economic forecast underlying this report. Members of that panel are Robert J. Barro, Michael Boskin, Barry P. Bosworth, Robert Dedrick, Rudiger Dornbusch, Martin Feldstein, Robert J. Gordon, Lyle E. Gramley, Robert E. Hall, Marvin Kesters, Anne Krueger, N. Gregory Mankiw, Allan Meltzer, Rudolph Penner, James Poterba, Robert Reischauer, Sherwin Rosen, Joel Slemrod, John Taylor, and James Tobin. Stuart Altman, Robert E. Mellman, Joel Prakken, and Victor Zarnowitz attended the meeting as guests. Despite the considerable assistance afforded by those outside advisers, they are not responsible for any errors in the analyses in this report.

Paul L. Houts supervised the editing of this volume. Major portions were edited by Paul L. Houts, Sherry Snyder, and Sherwood Kohn, with the assistance of Christian Spoor. The authors owe thanks to Marion Curry, Linda Lewis Harris, Denise Jordan, Dorothy Kornegay, and Simone Thomas, who assisted in producing sections of the report. Kathryn Quattrone and Jill Sands prepared the entire report for publication.

June E. O'Neill
Director

September 1997

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Summary

The federal budget will come close to balance this year and will move into surplus by 2002, according to the latest estimates of the Congressional Budget Office (CBO). Indeed, the budget is projected to be in virtual balance through 2007, with the deficit or surplus below 1 percent of gross domestic product (GDP) in any year. By contrast, at the beginning of this year, CBO projected that the deficit would be almost 2 percent of GDP by 2002, rising slightly above that by 2007.

The dramatic improvement in the fiscal outlook stems both from a brighter economic outlook and newly enacted legislation that will reduce the growth of federal spending. On July 31, the Congress completed action on two major pieces of legislation—the Taxpayer Relief and Balanced Budget Acts of 1997—which the President signed on August 5. Those two laws will directly reduce the projected federal deficit by \$95 billion in 2002 and by \$118 billion over the 1998-2002 period. In addition, balancing the budget will help to lower projected interest rates and improve the outlook for future economic growth.

Setting the budget on a course to balance is a significant achievement. Still, some words of caution are required.

First, the economic and other assumptions on which the budget projections are based could prove to be too optimistic. Just as favorable economic developments have caused the deficit outlook to improve rapidly in recent months, unfavorable developments could similarly cause a quick deterioration. In particular, the

onset of a recession could push the deficit above current projections by \$100 billion or more for several years.

Second, achieving budgetary balance in 2002 depends on adhering to new statutory limits on discretionary spending, which are quite restrictive after 2000. Discretionary spending has been squeezed since 1991, and it may be difficult for the Congress and the President to make the further real (inflation-adjusted) reductions required to live within the limits set by the new caps. In short, the tough decisions on appropriated spending have yet to be made.

Third, severe budgetary problems still await beyond the 10-year horizon, when the baby boomers will begin to retire and the costs of health care continue to escalate. Legislators will need to take substantial further action to set the growth in Social Security and Medicare spending at sustainable levels and to prevent spiraling deficits in the next century. To help address those problems, the Balanced Budget Act establishes a National Bipartisan Commission on the Future of Medicare, which is required to report its recommendations to the Congress and the President in March 1999.

The Budget Outlook

As fiscal year 1997 draws to a close, it is clear that the economy has performed better and the deficit has declined much more than CBO and most other forecasters anticipated. CBO now estimates that the deficit for 1997 will be \$34 billion, down \$81 billion from its def-

icit projection published in March. This year's deficit will be the lowest since 1974 and will mark the fifth straight year that the deficit has declined. As a percentage of GDP, CBO's estimate of the 1997 deficit matches the 0.4 percent of GDP recorded in 1974.

Unexpectedly large gains in revenue are the major factor pushing down the estimated deficit for 1997. Of the \$81 billion drop in the estimate, \$71 billion stems from higher revenues and the remaining \$10 billion from lower outlays. However, revised data on national

Summary Table 1.
Changes in CBO's Projections Since March 1997 (By fiscal year, in billions of dollars)

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| March Baseline Deficit ^a | -115 | -122 | -149 | -172 | -167 | -188 | -202 | -220 | -255 | -268 | -278 |
| Policy Changes | | | | | | | | | | | |
| Reconciliation | | | | | | | | | | | |
| Revenues | b | -9 | -7 | -23 | -27 | -15 | -29 | -31 | -33 | -34 | -35 |
| Outlays | | | | | | | | | | | |
| Discretionary spending | 0 | 11 | -1 | -14 | -31 | -53 | -55 | -57 | -58 | -60 | -62 |
| Mandatory spending | 0 | 1 | -10 | -30 | -16 | -52 | -39 | -46 | -53 | -71 | -57 |
| Debt service | <u>b</u> | <u>b</u> | <u>1</u> | <u>1</u> | <u>-1</u> | <u>-4</u> | <u>-7</u> | <u>-11</u> | <u>-15</u> | <u>-20</u> | <u>-26</u> |
| Subtotal, Reconciliation ^c | <u>b</u> | <u>-21</u> | <u>3</u> | <u>20</u> | <u>21</u> | <u>95</u> | <u>72</u> | <u>83</u> | <u>94</u> | <u>118</u> | <u>109</u> |
| Other legislation ^c | <u>2</u> | <u>b</u> | <u>b</u> | <u>b</u> | <u>b</u> | <u>b</u> | <u>b</u> | <u>b</u> | <u>b</u> | <u>b</u> | <u>b</u> |
| Total Policy Changes ^c | 2 | -21 | 3 | 20 | 21 | 95 | 72 | 83 | 95 | 118 | 109 |
| Economic Changes | | | | | | | | | | | |
| Revenues | 23 | 41 | 45 | 47 | 50 | 57 | 68 | 80 | 94 | 108 | 124 |
| Outlays | <u>b</u> | <u>-2</u> | <u>-8</u> | <u>-19</u> | <u>-25</u> | <u>-31</u> | <u>-38</u> | <u>-45</u> | <u>-53</u> | <u>-63</u> | <u>-74</u> |
| Total Economic Changes ^c | 23 | 43 | 52 | 65 | 75 | 89 | 106 | 125 | 147 | 172 | 198 |
| Technical Changes | | | | | | | | | | | |
| Revenues | 46 | 37 | 26 | 22 | 17 | 17 | 18 | 19 | 25 | 23 | 25 |
| Outlays | <u>-10</u> | <u>-7</u> | <u>-15</u> | <u>-16</u> | <u>-18</u> | <u>-19</u> | <u>-19</u> | <u>-22</u> | <u>-24</u> | <u>-27</u> | <u>-31</u> |
| Total Technical Changes ^c | 56 | 44 | 41 | 38 | 34 | 36 | 37 | 41 | 50 | 50 | 56 |
| Total Changes ^c | 81 | 66 | 97 | 124 | 130 | 219 | 215 | 249 | 291 | 340 | 363 |
| Current Baseline Deficit (-) or Surplus ^d | -34 | -57 | -52 | -48 | -36 | 32 | 13 | 29 | 36 | 72 | 86 |

SOURCE: Congressional Budget Office.

a. The baseline assumed that discretionary spending would equal the statutory cap in 1998 and grow at the rate of inflation in succeeding years. The economic forecast and the projections of revenues and mandatory spending assumed no change in policies that were current in March 1997.

b. Less than \$500 million.

c. Includes changes in both revenues and outlays. The figure shown is the effect on the deficit or surplus. Increases in the surplus are shown as positive.

d. The baseline assumes that discretionary spending will equal the newly enacted statutory caps on discretionary spending in 1998 through 2002 and will grow at the rate of inflation in succeeding years.

income and unanticipated rapid growth in the economy in 1997 explain only about one-third of the unexpected income tax revenues. Several other factors could account for the remaining increase, but available data do not yet permit an exact assessment. The \$10 billion decline in outlays largely reflects the pace of spending so far this year. Spending for Medicaid and other mandatory programs is somewhat lower than expected but is slightly offset by higher outlays for defense and transportation. Net interest is also lower, largely as a result of a lower deficit. Those same factors contribute to CBO's lower projections for expected deficits for the fiscal years after 1997.

The budget outlook for 1998 and beyond has been significantly altered as a result of the spending reductions enacted in the Balanced Budget Act of 1997 and the tax reductions contained in the Taxpayer Relief Act of 1997. CBO's baseline economic and budgetary projections contained in this volume incorporate its estimate of the effect of that legislative package as well as the small effects of other legislation enacted since March. The baseline economic projections also have been revised to incorporate new information about the state of the economy since CBO's last forecast.

The Balanced Budget and Taxpayer Relief Acts increase the deficit by an estimated \$21 billion in 1998, but reduce it thereafter. In 1998, the reconciliation legislation reduces revenues and increases outlays, primarily by a boost in discretionary spending. After 1998, the legislation cuts both taxes and spending. Revenues drop by \$80 billion over the next five years as a result of new tax credits for dependent children and certain educational expenses, reductions in the estate and gift taxes, expanded individual retirement accounts, reductions in the capital gains tax, and other tax changes. At the same time, outlays are held \$198 billion below the previous baseline levels by changes such as capping discretionary outlays through 2002, increasing offsetting receipts from auctions of the right to use portions of the electromagnetic spectrum, and reducing net health care expenditures (outlays for a new initiative to increase the number of children with health insurance partly offset the decreases in Medicare and Medicaid).

The cost of the tax cuts increases substantially after 2002, but reductions in the growth of spending more than offset it. Because some of the tax cuts will be phased in slowly, and because a few of the revenue-

reducing provisions produce short-term gains in revenue, the loss in revenue from the reconciliation legislation is twice as big in the second five years as in the first five. After 2007, when all of the tax provisions will be completely phased in, the tax cut will grow less rapidly than the economy.

Anticipated reductions in future discretionary outlays represent a significant portion of the legislative changes, just as sharply constrained discretionary spending has played a major role in reducing the deficit since 1991. To control the growth of discretionary spending, the Balanced Budget Act of 1997 sets discretionary spending limits for fiscal years 1998 through 2002 and extends the existing enforcement mechanism for that period. For fiscal year 1998, the cap on outlays is \$11 billion higher than under previous law. For fiscal years 1999 through 2002, the caps are lower than CBO's March baseline level, which increased the former 1998 cap at the rate of inflation for all years after 1998. Accordingly, the new caps provide savings for those years relative to CBO's March baseline estimates. As Summary Table 1 shows, restraining discretionary spending accounts for \$53 billion of the net legislative reduction of \$95 billion estimated for 2002. CBO's baseline assumes that the fiscal years after 2002 will show the same level of savings, though increased to reflect inflation.

After rising at less than half the expected rate of inflation between 1997 and 1999, discretionary spending will be limited to the same nominal level in 2002 as in 1999 (see Summary Table 2). That constraint will pare the purchasing power of discretionary spending in 2002 by about 12 percent relative to 1997 outlay levels. The planned reductions in real (inflation-adjusted) discretionary spending are similar to the discretionary cuts contained in the Omnibus Budget Reconciliation Act of 1993. However, continuing to constrain discretionary spending—it has barely increased since 1991 in nominal terms and has declined as a share of GDP—may prove difficult.

Sticking with a balanced budget fiscal policy will produce lasting benefits for the budget outlook. The most significant of those benefits is the near-freeze between 1997 and 2007 in the stock of debt held by the public. In CBO's projections, which assume no change in current policies and compliance with the discretionary caps, that indicator of fiscal health improves signifi-

cantly: it grows only 6 percent between now and 2002 in nominal terms, and it decreases as a share of GDP from 48 percent today to 40 percent in 2002. Should the surpluses projected for the years after 2002 be attained, the public debt will decline further and shrink to 30 percent of GDP. That figure is a striking 19 percentage points lower than the comparable figure in

CBO's March baseline. Shrinking the debt to that level, which has not occurred since 1982, would have a lasting effect on the budget outlook by reducing the cost of interest on previous deficit financing. It would also contribute to the future growth of the economy by increasing the capital stock.

Summary Table 2.
The Budget Outlook Through 2007 (By fiscal year)

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| In Billions of Dollars | | | | | | | | | | | |
| Revenues | 1,578 | 1,635 | 1,698 | 1,751 | 1,821 | 1,920 | 2,000 | 2,101 | 2,214 | 2,324 | 2,447 |
| Outlays | | | | | | | | | | | |
| Discretionary ^a | 550 | 556 | 561 | 566 | 565 | 561 | 579 | 597 | 615 | 634 | 654 |
| Mandatory | 902 | 968 | 1,019 | 1,075 | 1,142 | 1,195 | 1,272 | 1,347 | 1,444 | 1,509 | 1,609 |
| Offsetting receipts | -85 | -82 | -82 | -85 | -90 | -104 | -97 | -102 | -108 | -114 | -121 |
| Net interest | <u>245</u> | <u>250</u> | <u>251</u> | <u>244</u> | <u>239</u> | <u>236</u> | <u>233</u> | <u>230</u> | <u>227</u> | <u>223</u> | <u>219</u> |
| Total | 1,612 | 1,691 | 1,750 | 1,799 | 1,857 | 1,888 | 1,987 | 2,073 | 2,178 | 2,253 | 2,361 |
| Deficit (-) or Surplus | -34 | -57 | -52 | -48 | -36 | 32 | 13 | 29 | 36 | 72 | 86 |
| Debt Held by the Public | 3,784 | 3,859 | 3,926 | 3,988 | 4,039 | 4,021 | 4,020 | 4,003 | 3,978 | 3,916 | 3,842 |
| As a Percentage of GDP | | | | | | | | | | | |
| Revenues | 19.8 | 19.6 | 19.5 | 19.2 | 19.1 | 19.1 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| Outlays | | | | | | | | | | | |
| Discretionary ^a | 6.9 | 6.7 | 6.4 | 6.2 | 5.9 | 5.6 | 5.5 | 5.4 | 5.3 | 5.2 | 5.1 |
| Mandatory | 11.3 | 11.6 | 11.7 | 11.8 | 12.0 | 11.9 | 12.1 | 12.1 | 12.4 | 12.3 | 12.5 |
| Offsetting receipts | -1.1 | -1.0 | -0.9 | -0.9 | -0.9 | -1.0 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 |
| Net interest | <u>3.1</u> | <u>3.0</u> | <u>2.9</u> | <u>2.7</u> | <u>2.5</u> | <u>2.3</u> | <u>2.2</u> | <u>2.1</u> | <u>1.9</u> | <u>1.8</u> | <u>1.7</u> |
| Total | 20.3 | 20.3 | 20.1 | 19.7 | 19.4 | 18.8 | 18.8 | 18.7 | 18.7 | 18.4 | 18.4 |
| Deficit (-) or Surplus | -0.4 | -0.7 | -0.6 | -0.5 | -0.4 | 0.3 | 0.1 | 0.3 | 0.3 | 0.6 | 0.7 |
| Debt Held by the Public | 47.6 | 46.4 | 45.1 | 43.8 | 42.3 | 40.1 | 38.1 | 36.1 | 34.1 | 32.0 | 29.9 |
| Memorandum: | | | | | | | | | | | |
| Gross Domestic Product | | | | | | | | | | | |
| (Billions of dollars) | 7,955 | 8,324 | 8,700 | 9,116 | 9,555 | 10,039 | 10,552 | 11,089 | 11,650 | 12,237 | 12,852 |

SOURCE: Congressional Budget Office.

a. The baseline assumes that discretionary spending will equal the statutory caps on discretionary spending in 1998 through 2002 and will increase at the rate of inflation in succeeding years.

Summary Table 3.
Economic Projections for Calendar Years 1997 Through 2007

| | Actual 1996 | Forecast | | Projected | | | | | | | | |
|---|----------------|----------|-------|-----------|-------|-------|--------|--------|--------|--------|--------|--------|
| | | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Nominal GDP (Billions of dollars) | 7,636 | 8,053 | 8,415 | 8,802 | 9,223 | 9,672 | 10,165 | 10,684 | 11,227 | 11,794 | 12,388 | 13,011 |
| Nominal GDP (Percentage change) | 5.1 | 5.5 | 4.5 | 4.6 | 4.8 | 4.9 | 5.1 | 5.1 | 5.1 | 5.1 | 5.0 | 5.0 |
| Real GDP (Percentage change) | 2.8 | 3.4 | 2.1 | 1.9 | 2.1 | 2.2 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 |
| GDP Price Index (Percentage change) | 2.3 | 2.0 | 2.4 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 |
| CPI ^a (Percentage change) | 2.9 | 2.4 | 2.7 | 3.0 | 3.0 | 3.0 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| Unemployment Rate (Percent) | 5.4 | 5.0 | 5.1 | 5.5 | 5.8 | 5.9 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Three-Month Treasury Bill Rate (Percent) | 5.0 | 5.2 | 5.4 | 4.7 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| Ten-Year Treasury Note Rate (Percent) | 6.4 | 6.4 | 6.2 | 5.8 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 |
| Tax Bases (Billions of dollars) | | | | | | | | | | | | |
| Corporate profits | 736 | 767 | 768 | 775 | 789 | 801 | 825 | 853 | 887 | 922 | 959 | 1,001 |
| Wage and salary disbursements | 3,633 | 3,864 | 4,054 | 4,242 | 4,447 | 4,665 | 4,904 | 5,156 | 5,421 | 5,698 | 5,988 | 6,293 |
| Other taxable income | 1,693 | 1,782 | 1,854 | 1,918 | 1,985 | 2,068 | 2,161 | 2,261 | 2,367 | 2,477 | 2,593 | 2,714 |
| Tax Bases (Percentage of GDP) | | | | | | | | | | | | |
| Corporate profits | 9.6 | 9.5 | 9.1 | 8.8 | 8.6 | 8.3 | 8.1 | 8.0 | 7.9 | 7.8 | 7.7 | 7.7 |
| Wage and salary disbursements | 47.6 | 48.0 | 48.2 | 48.2 | 48.2 | 48.2 | 48.2 | 48.3 | 48.3 | 48.3 | 48.3 | 48.4 |
| Other taxable income | 22.2 | 22.1 | 22.0 | 21.8 | 21.5 | 21.4 | 21.3 | 21.2 | 21.1 | 21.0 | 20.9 | 20.9 |

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

a. The consumer price index for all urban consumers.

The Economic Outlook

The Congressional Budget Office's current forecast differs from its January forecast in several respects. Because of the surprising performance of the economy over the past several quarters and the absence of structural imbalances, CBO has revised upward its near-term forecast for economic growth and interest rates and revised downward its forecast for unemployment and inflation. CBO projects that after calendar year 1998, the economy will ultimately return to its long-run path for gross domestic product and the rate of unemployment. Long-term real growth is assumed to be slightly higher than in the January projections. Inflation is expected to be benign. Real short-term interest rates should drop to their average during the late 1950s and early 1960s, when federal deficits were similar to the levels expected in this baseline.

The performance of the U.S. economy over the past several quarters has been remarkable. Economic growth has picked up, the unemployment rate has dipped to a 24-year low, and inflation has tumbled despite evidence of mounting inflationary pressures. Moreover, CBO expects moderate growth in the second half of this calendar year.

Consumption and investment will continue to fuel near-term growth. Right now, household finances are healthy. In fact, the financial assets of households have been rising faster than their debt. Consequently, overall household spending is supported by stronger net assets. The financial health of business is also sturdy. Firms have greatly reduced their reliance on debt as the stock market has boomed and debt-financed mergers have waned. Interest costs as a share of net cash flow have fallen steadily since the late 1980s and are now at a 20-year low. Only a slight easing in investment is expected.

CBO expects that inflation will climb moderately starting in the second half of the current calendar year and continue to do so through 1998 (see Summary

Table 3). Inflationary pressures may lead the Federal Reserve to make modest increases in its target for the federal funds rate. With inflation expected to rise, such a step would help to keep real short-term interest rates from dropping below current levels and keep monetary policy modestly restrictive.

Beyond 1998, CBO assumes that the economy will return gradually to its long-run path. (CBO does not attempt to estimate cyclical movements of the economy beyond its two-year forecast period.) Real growth is projected to average 2.3 percent during the 1999-2007 period. That growth path for real GDP is about 0.2 percentage points higher than CBO assumed last winter. CBO has increased its estimate of potential output because of an increase in investment that is expected to accompany reductions in the budget deficit, new data for hours worked and capital stock, and changes in the measurement of prices. Inflation measured by the consumer price index for all urban consumers is projected to average 3.1 percent, and long-term interest rates to average 5.7 percent. Since the end of calendar year 1994, the unemployment rate has been below CBO's estimate of the nonaccelerating inflation rate of unemployment (NAIRU). The unemployment rate is expected to rise and reach CBO's current estimate of the NAIRU for calendar year 2000. It is then assumed to return to the historical relationship between the NAIRU and the unemployment rate by calendar year 2002.

Conclusion

CBO projects that the policy changes enacted in the Balanced Budget and Taxpayer Relief Acts of 1997 will produce a balanced federal budget by 2002. Those policy changes do more than merely eliminate the deficit in that year: the reconciliation legislation changes the projected path of the deficit from one of annual increases to one that hovers near zero for the next 10 years. The challenge lies in maintaining the course laid out in the recent reconciliation legislation.

The Economic Outlook

After growing at a healthy pace for all of 1996, the U.S. economy grew at an even faster clip during the first half of 1997. Although vigorous on average, growth for the first half of 1997 has been uneven, with real (inflation-adjusted) gross domestic product (GDP) growing at an annual rate of 4.9 percent in the first quarter and then slowing to less than half that rate in the second quarter. Despite those quarterly swings, fundamental economic conditions remain strong entering the second half of 1997, and the Congressional Budget Office (CBO) expects that strength to carry the economy through 1998 without a recession.

Robust economic conditions such as those in the United States over the past few years typically signal higher inflation. However, according to most measures, inflation is lower now than it was in late 1994. One possibility is that temporary factors have masked inflation. Alternatively, some analysts suggest that the economy has changed in a way that allows it to withstand pressures of greater demand without producing an increase in inflation. Whatever the reason, the recent weakness of inflation raises an uncertainty as to how to interpret conventional measures of inflationary pressures. Reflecting that uncertainty, CBO expects inflation to rise but predicts only a mild increase.

The Federal Reserve, expressing concern about incipient inflation, responded to the robust performance of the economy early in the year by raising the target for the federal funds rate at its March meeting. During the second quarter of 1997, as the economy showed signs of cooling, the Federal Reserve held the target for the federal funds rate steady. Entering the second half of

1997, however, economic growth is expected to be sturdy enough to again raise concerns about inflation and rekindle the possibility of further increases in short-term interest rates through mid-1998.

CBO forecasts that real GDP will grow 3.0 percent from the fourth quarter of 1996 to the fourth quarter of 1997 and 1.8 percent over the four quarters of 1998 (see Table 1 and Figure 1). The unemployment rate is expected to be 5.0 percent in 1997—the lowest annual unemployment rate since 1973—and to rise only slightly in 1998 to 5.1 percent. Inflation as measured by the consumer price index (CPI) has eased over the past year. CBO expects inflation to be 2.1 percent over the four quarters of 1997 and to rise to 3.0 percent over the four quarters of 1998. On a calendar year basis, the CPI will grow 2.4 percent in 1997 and 2.7 percent in 1998. Short-term interest rates will increase from their 1996 level of 5.0 percent to 5.2 percent in 1997 and 5.4 percent in 1998. Long-term interest rates will remain unchanged at 6.4 percent in 1997 and then dip to 6.2 percent in 1998.

The current forecast represents CBO's estimate of the most likely path of the economy through 1998. However, as usual, the forecast is subject to the unexpected. Economic growth, inflation, and interest rates could be higher or lower than CBO anticipates. One possible risk is that temporary factors are in fact responsible for masking inflation. Should those temporary factors disappear faster than CBO expects, inflation could rise significantly in the latter half of 1997 and in 1998. A significant burst in the inflation rate might prompt the Federal Reserve to tighten monetary

Table 1.
The CBO Forecast for 1997 and 1998

| | 1996 ^a | Forecast | |
|---|-------------------|----------|------|
| | | 1997 | 1998 |
| Fourth Quarter to Fourth Quarter (Percentage change) | | | |
| Nominal GDP | | | |
| CBO September | 5.6 | 5.0 | 4.4 |
| CBO January | 4.7 | 4.5 | 4.7 |
| Real GDP ^b | | | |
| CBO September | 3.3 | 3.0 | 1.8 |
| CBO January | 2.7 | 2.1 | 2.1 |
| Implicit GDP Deflator | | | |
| CBO September | 2.2 | 2.0 | 2.6 |
| CBO January | 2.2 | 2.4 | 2.6 |
| Consumer Price Index ^c | | | |
| CBO September | 3.2 | 2.1 | 3.0 |
| CBO January | 3.1 | 2.9 | 3.0 |
| Calendar Year Average (Percent) | | | |
| Real GDP Growth ^b | | | |
| CBO September | 2.8 | 3.4 | 2.1 |
| CBO January | 2.3 | 2.3 | 2.0 |
| Civilian Unemployment Rate | | | |
| CBO September | 5.4 | 5.0 | 5.1 |
| CBO January | 5.4 | 5.3 | 5.6 |
| Three-Month Treasury Bill Rate | | | |
| CBO September | 5.0 | 5.2 | 5.4 |
| CBO January | 5.0 | 5.0 | 5.0 |
| Ten-Year Treasury Note Rate | | | |
| CBO September | 6.4 | 6.4 | 6.2 |
| CBO January | 6.4 | 6.2 | 6.2 |

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

NOTE: The January forecast is the baseline forecast published in CBO's *The Economic and Budget Outlook: Fiscal Years 1998-2007* (January 1997).

a. The numbers for 1996 are actual values for CBO's September forecast but are estimates for the January forecast. The actual values listed for September incorporate the revisions to the national income and product accounts in July 1997.

b. Based on chained 1992 dollars.

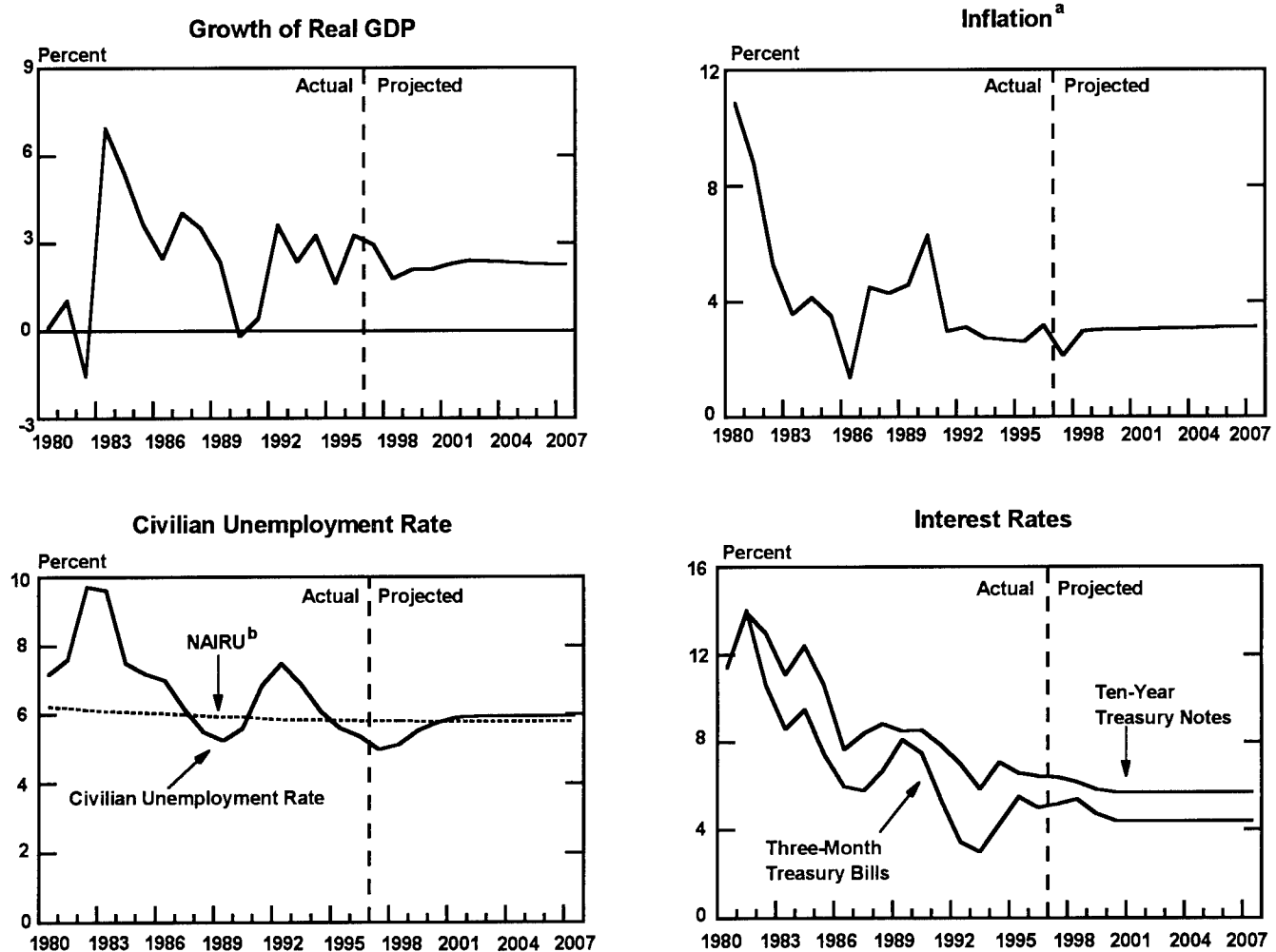
c. The consumer price index for all urban consumers.

policy enough to heighten the possibility of an economic contraction in late 1998 or 1999.

CBO does not forecast cyclical developments in the economy beyond the calendar year following the current budget year. After 1998, therefore, the economy is assumed to return to its long-run path, with growth in real

GDP averaging 2.3 percent, inflation averaging 3.1 percent, and the unemployment rate averaging 5.9 percent through 2007. Interest rates decline, with short-term rates averaging 4.4 percent and long-term interest rates averaging 5.7 percent for the period from 1999 through 2007.

Figure 1.
The Economic Forecast and Projection



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board.

NOTE: All data are annual values; growth rates are year over year.

a. Consumer price index for all urban consumers (CPI). The treatment of home ownership in the official CPI changed in 1983. The inflation series in the figure uses a consistent definition throughout.

b. NAIRU is CBO's estimate of the nonaccelerating inflation rate of unemployment.

The current CBO forecast differs from the January baseline forecast in several respects. CBO has revised its forecast for economic growth upward in 1997 and downward in 1998. Interest rates are generally higher than in the January baseline forecast, whereas the unemployment rate is lower. The inflation rate is higher in 1997 and lower in 1998.

The State of the Economy

The performance of the U.S. economy over the past several quarters has been stunning. Economic growth has increased, and the unemployment rate has dipped to a 24-year low. Yet inflation has ebbed despite the mounting evidence of inflationary pressures.

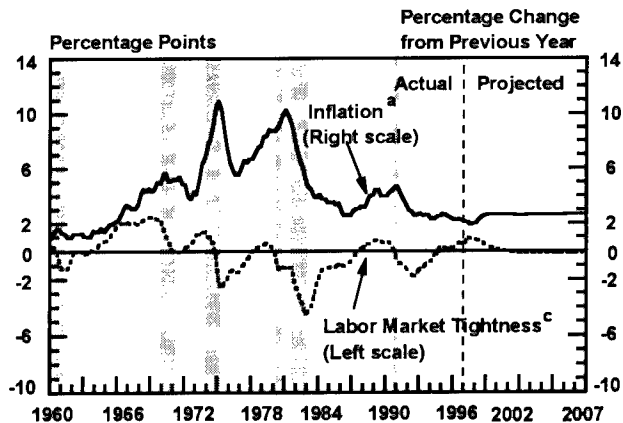
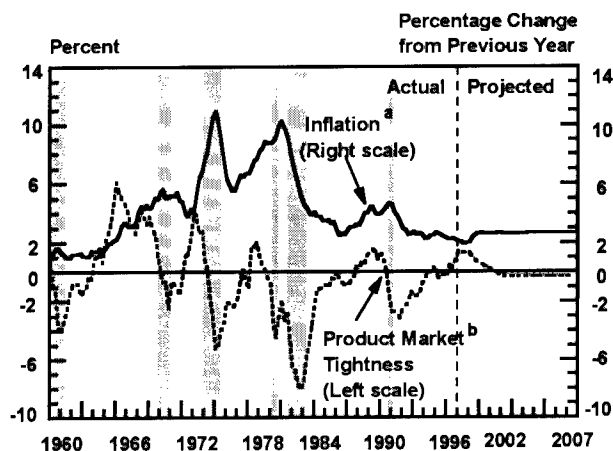
The Buildup of Inflationary Pressures Over the Past Year

The benign behavior of inflation over the past year is puzzling. Conventional measures of inflationary pressures from both the product and labor markets suggested an increase in the underlying rate of inflation in late 1996 or early 1997. Several temporary masking factors may account for much of the "missing inflation." Alternatively, some analysts suggest that the economy has changed in a way that makes inflation less responsive to pressures from a buildup of demand. Unfortunately, uncertainty surrounds both the measures of demand pressures and the estimated size and timing of the inflationary response to those pressures. As a result, determining the precise reason why inflation has been so subdued is extremely difficult.

Inflationary Pressures in the Product Market. One conventional measure of inflationary pressure is the tightness of the product market, otherwise known as the GDP gap—the percentage difference between actual output and the estimated level of potential or sustainable output. When the economy operates above potential, demand for inputs such as labor, capital, and raw materials is strong, thereby generating upward pressure on prices. CBO estimates that the U.S. economy has been operating above potential since the second quarter of 1996 and that the recent surge in growth pushed the economy significantly above potential in early 1997

(see Figure 2). Although inflation usually begins to climb after the economy exceeds its potential, the timing and the magnitude of the increase is uncertain and, as is the case with any estimate, subject to error. Nev-

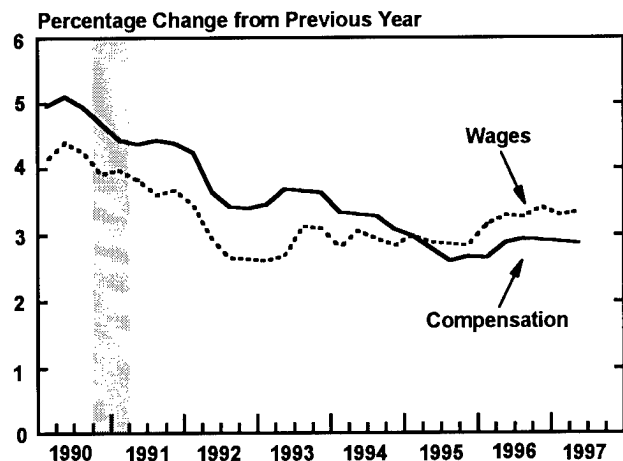
Figure 2.
Inflation and Tightening in the Product Market and Labor Market



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics.

- Price index for GDP.
- The degree of tightness in product markets is measured by the percentage difference between real GDP and CBO's estimate of potential output. When positive, that difference indicates inflationary pressure.
- The degree of tightness in the labor market is measured by the difference between CBO's estimate of the nonaccelerating inflation rate of unemployment (NAIRU) and the actual unemployment rate. When positive, that difference indicates inflationary pressure.

Figure 3.
Growth in Wages and Compensation
in the Private Sector



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

ertheless, CBO estimates that the inflationary pressure indicated by the GDP gap should have increased the growth of the GDP price index by roughly 0.2 percentage points over the past two years. Instead, growth of the GDP price index is roughly 0.3 percentage points below what it was in 1994.

Inflationary Pressures in the Labor Market. Another indicator of inflationary pressures is the unemployment rate. Typically, when the economy exceeds its level of potential output, strong demand for labor reduces the unemployment rate and puts upward pressure on wages and salaries. Thus, a drop in the unemployment rate below a certain level generally signals increased inflationary pressures. CBO estimates that rate (called the NAIRU, or the nonaccelerating inflation rate of unemployment) at 5.8 percent for recent years. The unemployment rate has been below the NAIRU since the end of 1994.

A rule of thumb is that for each year the unemployment rate is below the NAIRU by 1 percentage point, inflation will increase by about half a percentage point over the next two years. According to that rule of thumb, inflation (measured by the GDP price index) should have increased by roughly 0.7 percentage points since 1994.

Despite the slowing of price inflation, the recent tightness of the labor market has begun to show up in an increase in employment costs. For the year ending in the second quarter of 1995, the employment cost index for wages and salaries grew 2.9 percent. For the year ending in the second quarter of 1997, that index grew 3.3 percent. The growth of the employment cost index for total compensation has also risen. However, it remains roughly half a percentage point lower than the measure of growth in money wages and salaries (see Figure 3).

The growth in total compensation has been held down by relatively low growth in expenditures on fringe benefits by employers. The cost of providing health benefits has slowed. KPMG Peat Marwick, for example, estimates that the rate of increase in employment-based health insurance premiums was only 0.5 percent in 1996 and 2.1 percent in 1997.¹ That slow growth is the result of a continuing switch to managed care plans as well as slower growth in premiums for those plans. Declining coverage of dependent children, who have become increasingly eligible for Medicaid, and of retirees has also helped to hold down the costs of health care to employers.

The unemployment gap and the GDP gap indicate different amounts of inflationary pressure, but both signal an increase in inflation. Thus, some increase in the amount of inflation was expected to occur between 1996 and the second quarter of 1997 regardless of the measure employed. The surprising decrease in inflation over that period therefore raises the question of whether temporary factors are masking inflationary pressures or the economy has actually changed in a way that makes it less susceptible to inflationary pressures when growth is high and the unemployment rate is low.

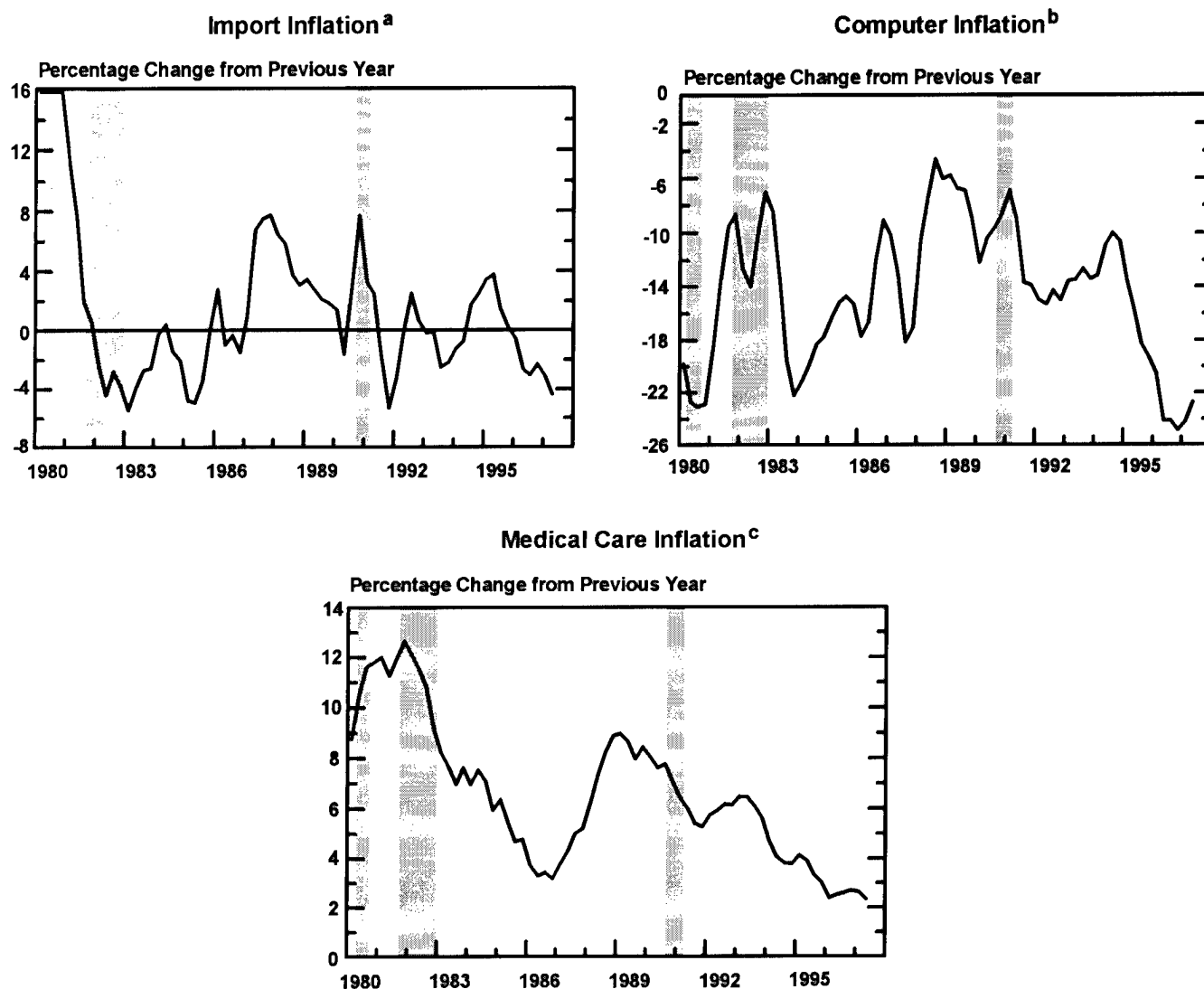
Temporary Factors Masking Inflation. Through the first half of 1997, a number of temporary factors have appeared that can account for most of the discrepancy between the actual inflation rate—measured by the GDP price index—and the inflation rate predicted by the unemployment rate and GDP gaps.

1. KPMG Peat Marwick, *Health Benefits in 1996* (Washington, D.C.: KPMG Peat Marwick, October 1996), p. 6; and Bureau of National Affairs, *BNA Labor Daily* (July 9, 1997).

Technical adjustments to the CPI in January 1995 and mid-1996 have reduced growth in the CPI by roughly 0.2 to 0.3 percentage points (see Appendix B for more details). The technical adjustments to the CPI reduced the growth of the GDP price index by a smaller 0.1 to 0.2 percentage points, because the CPI represents only a portion of the GDP price index.

In addition, unusual weakness in some key prices may be holding down overall inflation measures. The strong dollar has suppressed import prices since early 1995 (see Figure 4). That factor directly accounts for about 0.4 percentage points of the discrepancy. Low import prices may also have contributed to holding down domestic inflation through their indirect impact

Figure 4.
Inflation in Imports, Computers, and Medical Care



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

a. Price index for imports.

b. Price index for business investment in computers.

c. Price index for medical care.

on import-competing industries, but that effect is difficult to quantify. Computer prices have tumbled dramatically, and inflation in the price of medical care has declined over the past two years. Those factors account for an additional 0.2 to 0.3 percentage points of the discrepancy, though some of the weakness in computer prices may reflect the strength in the dollar.

One can make a strong case that the recent behavior of import, computer, and medical prices is temporary. Because the dollar is unlikely to continue to strengthen as it has over the past two years, import prices will stabilize or even rise. Although computer prices are expected to continue dropping, the rate of decline will probably slacken. In contrast, the recent low inflation rate in the price of medical care may persist for a longer period of time because of ongoing competition among health plans and the efficiency of managed care. Nevertheless, signs of upward pressure on health insurance premiums are beginning to emerge as managed care providers try to rebuild their profit margins and as employees demand more services from managed care practices.

Other Explanations for the "Missing Inflation." Although temporary masking factors may account for the bulk of the discrepancy between actual and predicted inflation, other explanations for this puzzling missing inflation exist. The response of inflation to demand pressures could be operating with a longer lag than was true in the past for a variety of reasons. For example, the credibility of the Federal Reserve as an inflation fighter may have grown as a result of a good inflation record. Consequently, workers and firms may have expected the monetary authorities to reduce the inflationary pressures before inflation actually rose.

Some analysts have suggested that the short-run relationship between demand pressures and inflation may have changed in a more permanent way. One way the response of inflation might have fallen is if domestic firms have begun resorting to underused production facilities abroad when domestic facilities or labor supplies are strained to capacity. That move could reduce the inflationary response to tight labor markets in the United States.

Alternatively, because of changes in the structure of the economy or in the composition of the labor force,

the NAIRU may have declined below the 5.8 percent that CBO currently estimates.

So far, the mystery of the missing inflation has not been resolved. The presence of temporary masking factors suggests that inflation is likely to rise once those factors have run their course. Because inflation has not yet increased, however, it is difficult to ignore the possibility that traditional measures of demand pressures may overstate true inflationary pressures and that the relationship between inflation and demand pressures has changed.

The Prospect for Near-Term Growth

Despite the brief slowdown in economic activity in the second quarter of 1997, fundamental economic conditions remain strong, and CBO expects that strength to continue through the second half of 1997. The economy should then slow to a more moderate pace next year under the Federal Reserve's continued policy of mild monetary restraint.

Households. Brisk employment, growth in income, rising consumer confidence, and a booming stock market—combined with unusually warm weather during the winter months—have spurred consumer spending over the past three quarters. Real expenditures for consumption grew at an average annual rate of 4.3 percent during the last quarter of 1996 and the first quarter of 1997—the highest two-quarter average in almost five years. In the second quarter of 1997, consumer spending weakened considerably, partly as consumers took a breather from their earlier spending pace and reacted to temporary factors such as colder-than-usual weather and labor strikes in the auto industry. Even with a weak second quarter, the average growth rate of expenditures for consumption for the three-quarter period ending in the second quarter of 1997 was still a robust 3.1 percent. Given the healthy growth in employment and earnings, growth of consumption will probably remain solid through the end of 1998.

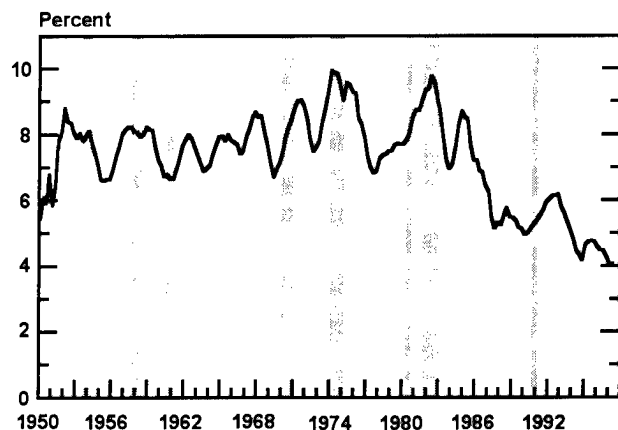
The recent strength in consumer spending has lowered the personal saving rate (see Figure 5). During the first half of 1997, the four-quarter average of the personal saving rate was 4.1 percent—the lowest in almost

50 years. Some analysts maintain that the recent decline in the saving rate is a product of the increase in the value of the stock market. Such an increase in wealth encourages households to consume a larger portion of their disposable income, thus lowering the saving rate.

The recent strength in consumer spending also suggests that worries over the rise in consumer debt are misplaced. Some analysts have voiced concern that the steady ascent of delinquency rates on consumer loans since the end of 1994 would hamper future growth in consumption. A more complete analysis of household finances reveals, however, that they are in fact notably healthy.

The value of the financial assets of households has been rising faster than debt. Moreover, the ratio of net financial assets to disposable personal income averaged 3 percent during the fourth quarter of 1996 and the first quarter of 1997 (the latest data available). At 3 percent, that ratio is the highest it has been since 1968. In addition, current delinquencies on consumer loans remain below the rates that prevailed through the latter half of the 1980s. Also, the growth of debt has slackened recently as creditors have tightened lending standards and consumers have reduced their appetite for debt. Thus, even if debt problems were holding back

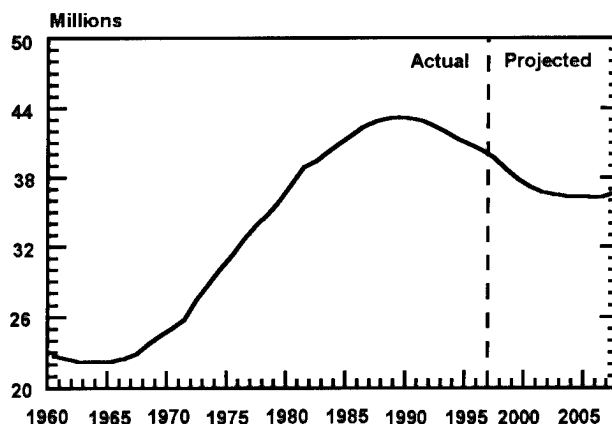
Figure 5.
The Personal Saving Rate



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

NOTE: Average, over four quarters, of personal saving as a percentage of disposable personal income.

Figure 6.
The Population That Is 25 to 34 Years Old



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of the Census.

NOTE: Census projections were spliced into historical data available through 1997.

growth in consumption, that effect would appear to be waning.

After weakening in late 1996, the housing sector rebounded somewhat during the first half of 1997 but is likely to weaken modestly in the second half. The unusually warm weather in February probably sparked much of the first-quarter surge in housing starts, which pushed total housing starts up to a 15.5 million annual pace—the largest monthly figure since March 1994.

In addition to the warm weather, economic conditions have been favorable for the housing sector. Spurred by strong growth in income and employment, as well as a slight rise in housing affordability, new home sales increased at a brisk pace for the first quarter of 1997. The surge in new home sales was strong enough to push down the ratio of new houses for sale to new houses sold to a 26-year low in the first half of 1997. Thus, even if home sales return to a more sustainable level in the later half of 1997, housing starts are not likely to plummet as builders replenish their stocks.

The long-term factors that should limit future housing demand remain in place, however. Consequently, this year's strength is unlikely to prevail in 1998 and subsequent years. Slower rates of household formation

and a decline in the portion of the population most likely to be first-time home buyers (people 25 to 34 years old) are expected to weaken housing construction in the late 1990s (see Figure 6).

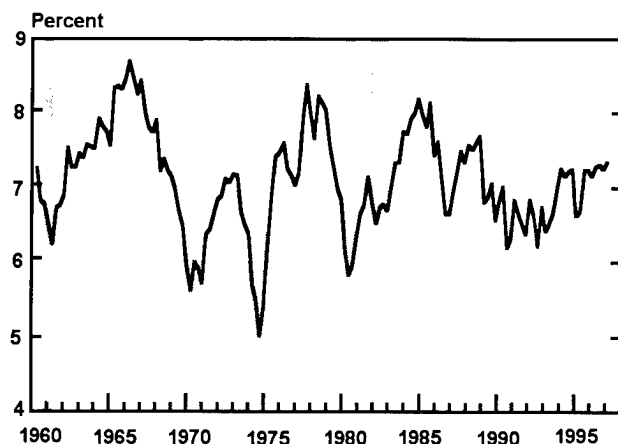
Businesses. After slackening its pace in the last half of 1996, business investment picked up again in the first half of 1997, and the fundamentals suggest that it will continue to be moderately strong through 1998.

Firms are now operating at a high level of capacity, and if anything are likely to augment capacity. In addition, although overall demand for goods is expected to dwindle slightly, it should remain solid enough to encourage a modest expansion of capacity.

The financial health of business is splendid. The gross cash flow for firms has been generally climbing since 1992 (see Figure 7). Interest costs as a share of net cash flow have fallen since the late 1980s and are now at a 20-year low (see Figure 8). Part of the reason for that decline is that interest rates are lower now than during the late 1980s. In addition, firms are not relying heavily on debt financing given the recent boom in the stock market.

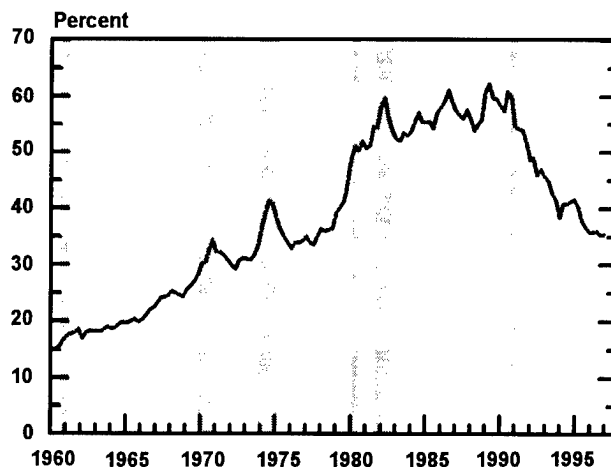
CBO expects nonresidential construction to increase at a healthy rate in 1998. During the first half of

Figure 7.
Gross After-Tax Corporate Cash Flow
as a Percentage of Potential Output



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

Figure 8.
Interest Payments by Business
as a Percentage of Cash Flow



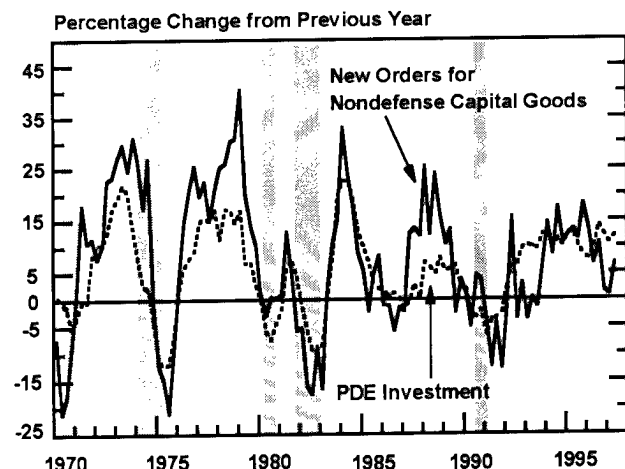
SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

1997, real spending for nonresidential construction showed little growth after scoring a healthy 4.8 percent rate in 1996. Indicators of future activity in nonresidential construction continue to signal further gains. Construction contracts, which tend to lead construction activity, trended lower throughout 1996 and picked up slightly at the beginning of 1997. At the same time, office vacancy rates have plunged since 1992, especially in suburban markets. That upbeat trend possibly signals a resurgence in the construction of office buildings in the near term.

The growth in spending on real producers' durable equipment rebounded slightly in the first half of 1997 from its 10.9 percent rate in 1996. Increased expenditures on computers account for most of the growth in spending on business capital. Real business purchases of computers grew at a 33 percent annual rate during the first half of 1997.

Growth in expenditures on capital equipment should moderate further through 1998. Orders for nondefense capital goods, a leading indicator of capital expenditures, have trended downward since mid-1995 (see Figure 9). Although large orders for civilian aircraft in early 1996 are expected to boost spending in the latter half of 1997, they will partially mask the

Figure 9.
New Orders for Nondefense Capital Goods and
Investment in Producers' Durable Equipment



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis, and Bureau of the Census.

fall expected to occur as a result of the drop in shipments from other industries.

International. The real trade deficit for goods and services as a share of GDP, which in 1996 was the largest in eight years, widened even more in the first two quarters of 1997 (see Figure 10). Strong U.S. growth and the surge in the dollar contributed to the further widening of the trade deficit. In addition, foreign growth, although stronger than expected, was not strong enough to reverse the widening trade deficit.

Recent developments in the United States and international conditions indicate that the real trade deficit is likely to grow worse in the second half of 1997 and into 1998. The trade-weighted dollar has remained high, even though it fluctuated noticeably against the yen and the deutsche mark in recent months. Stronger-than-expected growth in foreign income has been driven mainly by exports and is therefore unlikely to be translated into demand for U.S. exports immediately.

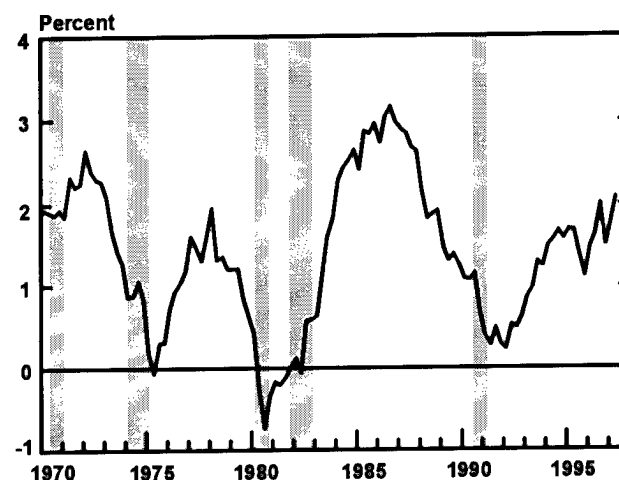
In the meanwhile, the vitality of the U.S. economy maintains a healthy appetite for imports. Moreover, since U.S. imports are already significantly greater than exports, exports must grow faster than imports just to

keep the trade deficit from widening further. When combined, those conditions indicate that the external sector will remain a modest drag on the U.S. economy over the near term.

The overall economic conditions of U.S. trading partners are expected to improve. But improvements are varied both among and within regions of the world. The recovery has been most notable in North and South America. The recoveries in Canada and Mexico, which have recently benefited from strong growth in exports, are expected to gain a more firm footing as domestic demand solidifies. Of course, given the Mexican peso's recent history and current strength, the outlook of overly brisk Mexican domestic demand—carrying the potential of a trade deficit by 1998—may by itself be somewhat worrisome. Fortunately, the peso has remained steady throughout a tumultuous midterm election campaign for Mexico's Congress and despite the ruling party's loss of the majority. The recovery in South America has benefited greatly from increases in capital inflows, declines in inflation, and lower domestic nominal interest rates.

Although the Japanese economy strongly rebounded in 1996, the overall growth in Asia has wound down in 1996 and is expected to edge even lower in 1997. Japan posted a 3.6 percent growth rate in

Figure 10.
The U.S. Trade Deficit as a Percentage of GDP



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

1996—the highest since 1991. The effect of a tax hike in April and other measures of fiscal restraint should limit Japan's economic growth, however, so even a near-zero interest rate will support only a modest pace of recovery. Spurred by the weak yen, foreign trade seems set to be Japan's primary source of strength in the near term.

The brisk growth rates of the newly industrialized economies of Asia have unmistakably tapered, though they are still at around 6 percent. The region's financial and regulatory infrastructures badly need to be improved, as indicated by the fallout following the recent devaluation of the Thai baht, but the region's economy does have the potential of surging ahead in the future.

The Chinese economy grew at a 10 percent rate in 1996, little changed from its 11 percent rate in 1994. In addition, the inflation rate fell—from 24 percent in 1994 to 8 percent in 1996—which paves the way for sustainable growth. The financial markets' positive reaction to the recent handover of Hong Kong to China also indicates that the economic vibrancy of both regions is unlikely to be interrupted by that important change.

The export-led recovery in European economies has acquired a much brighter outlook than previously expected, thanks to low rates of interest and weak currencies. The cloud of uncertainty over the European Monetary Union (EMU), which has lowered the deutsche mark against the dollar noticeably in recent months, is likely to continue to depress the currencies of Continental Europe. The weakening in European currencies will no doubt help to boost recovery there further. However, overall growth is likely to be constrained by two main factors limiting recovery in domestic demand—fiscal restraints imposed by the EMU's criteria for convergence, and stubbornly high unemployment rates.

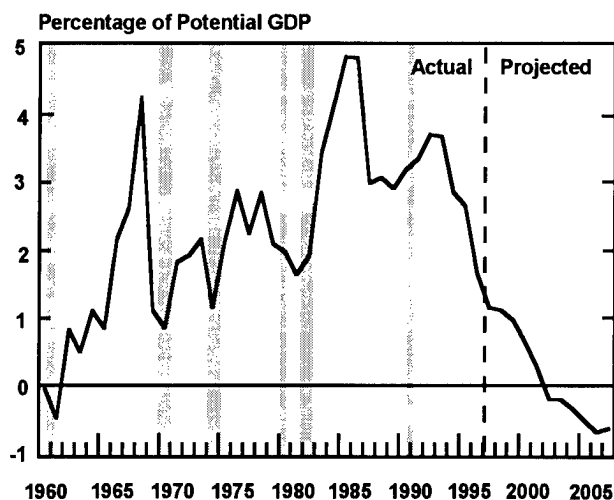
Fiscal Policy. Helped mainly by an unexpected surge in tax revenues, the U.S. budget deficit for the current fiscal year will fall to \$34 billion, according to CBO's estimate. That is the smallest deficit since 1974—less than a third as large as the numbers projected for 1997 in CBO's January and March reports. About a third of the surge in revenues stems from stronger-than-expected economic growth. The rest reflects factors that have raised revenues relative to the income re-

ported in the national income and product accounts (see Chapter 2 for details). CBO projects a rise in the deficit to \$57 billion for 1998.

To measure the short-term impact of fiscal policy, CBO usually uses the standardized-employment deficit, which excludes from the actual deficit the effects of the business cycle. It also excludes factors that have little if any current economic effect, such as outlays for deposit insurance, spectrum auction receipts, and timing adjustments for certain federal payments and receipts. But it does not make adjustments for other factors, such as those that may have caused the recent surge in revenues relative to reported income. Such factors can distort CBO's measure of fiscal policy.

The standardized-employment deficit is expected to decline from 1.7 percent of potential GDP in 1996 to 1.2 percent in 1997 and 1.1 percent in 1998 (see Figure 11 and Table 2). Ordinarily, CBO would view the decline in 1997 as somewhat restrictive. But some of the factors that might explain the unexpected rise in revenues do not restrain the economy—for example, increased realizations of capital gains or possible upward revisions to national income. If adjustments were made for such factors, the standardized-employment deficit

Figure 11.
The Standardized-Employment Deficit
(By fiscal year, on a unified budget basis)



SOURCE: Congressional Budget Office.

Table 2.
Measures of Fiscal Policy Under Baseline Assumptions (By fiscal year)

| | Actual | | | | Projected | | | | | | | | | | |
|---|--------|-------|-------|-------|-----------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| In Billions of Dollars | | | | | | | | | | | | | | | |
| Standardized-Employment Deficit (-) or Surplus ^a | -242 | -196 | -192 | -125 | -91 | -92 | -83 | -59 | -28 | 20 | 22 | 38 | 61 | 85 | 82 |
| Reconciliation with Budget Deficit | | | | | | | | | | | | | | | |
| Cyclical deficit | -41 | -10 | 3 | 4 | 33 | 34 | 15 | 4 | -7 | -10 | -10 | -11 | -11 | -12 | -13 |
| Deposit insurance | 28 | 8 | 18 | 8 | 14 | 5 | 4 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| Timing shifts ^b | 0 | -4 | -1 | 5 | -1 | -7 | 8 | 0 | -8 | 8 | 0 | 0 | -14 | -1 | 16 |
| Spectrum auctions | 0 | 0 | 8 | 0 | 11 | 3 | 4 | 4 | 4 | 12 | 0 | 0 | 0 | 0 | 0 |
| Total Budget Deficit (-) or Surplus | -255 | -203 | -164 | -107 | -34 | -57 | -52 | -48 | -36 | 32 | 13 | 29 | 36 | 72 | 86 |
| Debt Held by the Public | 3,247 | 3,432 | 3,603 | 3,733 | 3,784 | 3,859 | 3,926 | 3,988 | 4,039 | 4,021 | 4,020 | 4,003 | 3,978 | 3,916 | 3,842 |
| Net Interest Payments | 199 | 203 | 232 | 241 | 245 | 250 | 251 | 244 | 239 | 236 | 233 | 230 | 227 | 223 | 219 |
| Effect of Reconciliation Legislation ^c | n.a. | n.a. | n.a. | n.a. | 0 | -21 | 3 | 20 | 21 | 95 | 72 | 83 | 94 | 118 | 109 |
| As a Percentage of Potential GDP | | | | | | | | | | | | | | | |
| Standardized-Employment Deficit (-) or Surplus ^a | -3.7 | -2.9 | -2.7 | -1.7 | -1.2 | -1.1 | -1.0 | -0.6 | -0.3 | 0.2 | 0.2 | 0.3 | 0.5 | 0.7 | 0.6 |
| Reconciliation with Budget Deficit | | | | | | | | | | | | | | | |
| Cyclical deficit | -0.6 | -0.1 | 0 | 0.1 | 0.4 | 0.4 | 0.2 | 0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 |
| Deposit insurance | 0.4 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Timing shifts ^b | 0 | -0.1 | 0 | 0.1 | 0 | -0.1 | 0.1 | 0 | -0.1 | 0.1 | 0 | 0 | -0.1 | 0 | 0.1 |
| Spectrum auctions | 0 | 0 | 0.1 | 0 | 0.1 | 0 | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 |
| Total Budget Deficit (-) or Surplus | -3.9 | -3.0 | -2.3 | -1.4 | -0.4 | -0.7 | -0.6 | -0.5 | -0.4 | 0.3 | 0.1 | 0.3 | 0.3 | 0.6 | 0.7 |
| Debt Held by the Public | 49.4 | 50.0 | 50.1 | 49.6 | 48.1 | 46.9 | 45.4 | 43.8 | 42.2 | 39.9 | 38.0 | 36.0 | 34.0 | 31.9 | 29.8 |
| Net Interest Payments | 3.0 | 3.0 | 3.2 | 3.2 | 3.1 | 3.0 | 2.9 | 2.7 | 2.5 | 2.3 | 2.2 | 2.1 | 1.9 | 1.8 | 1.7 |
| Effect of Reconciliation Legislation ^c | n.a. | n.a. | n.a. | n.a. | 0 | -0.3 | 0 | 0.2 | 0.2 | 0.9 | 0.7 | 0.8 | 0.8 | 1.0 | 0.9 |
| Memorandum: | | | | | | | | | | | | | | | |
| Potential GDP | | | | | | | | | | | | | | | |
| (Billions of dollars) | 6,579 | 6,869 | 7,198 | 7,525 | 7,860 | 8,228 | 8,653 | 9,105 | 9,577 | 10,068 | 10,582 | 11,120 | 11,683 | 12,272 | 12,889 |

SOURCE: Congressional Budget Office.

NOTES: The drop in the standardized-employment deficit in 1997 may reflect factors that raise federal revenue but that are not restraints to aggregate demand (see text for further discussion).

n.a. = not applicable.

- These numbers exclude outlays for deposit insurance and offsetting receipts from spectrum auctions. They also reflect shifts in the timing of revenue collections as well as adjustments for fiscal years in which there are 11 or 13 monthly payments for various entitlement programs instead of the usual 12.
- Includes an adjustment to account for shifts in the timing of excise tax and Universal Service Fund receipts, as well as an adjustment for shifts in the timing of mandatory spending.
- Reconciliation legislation consists of the Balanced Budget Act of 1997 and the Taxpayer Relief Act of 1997.

might not decline as much and might indicate an essentially neutral fiscal policy through 1998. The importance of those factors, however, cannot yet be determined because the needed data are not available.

By 2002, the standardized-employment budget is projected to show a slight surplus, as is the actual budget. Thus, for the years 2002 through 2007, the United States is expected to retire a small portion of the federal debt held by the public. Although the surpluses are projected to grow modestly larger through 2007, large budget deficits will emerge again as the baby boomers retire unless the fiscal pressures from Social Security, Medicare, and Medicaid are resolved. Hence, the progress achieved by the recent budget agreement does not constitute a permanent solution to the fiscal problems of the federal government.

Most of the deficit reduction in the next five years from the budget agreement would be realized in 2002. The legislation calls for gross tax reductions amounting to \$141 billion over five years, but it more than pays for them by cutting spending and raising revenues from other sources. The main features of the tax reductions include tax credits for children under 17, tax subsidies for education and saving, a lower tax rate on capital gains, and an increase in the amount of wealth exempt from the estate tax. The main features of the spending reductions are cuts in Medicare and discretionary outlays. Spectrum auction receipts will generate additional savings, especially in 2002. But those savings are partially offset by additional spending to provide increased health insurance coverage for children and to ameliorate some of the effects of last year's welfare legislation.

CBO's forecast of the budget deficit includes the reduction in interest rates from deficit reduction. The recently legislated changes in federal spending and taxes also affect the economic forecast by providing incentives and some disincentives for individuals to work and save and for firms to hire and invest. Though few of those effects can be estimated with precision, on balance, the net effects are likely to be very small (see Box 1).

Interest Rates and Monetary Policy. Interest rates rose and then fell over the first half of 1997, mostly paralleling the evolution of views about the implications of robust economic growth for inflation and the

likelihood of any monetary policy actions by the Federal Reserve. Lower-than-expected deficits may also have helped bring down long-term rates by midyear.

The rise in interest rates through the first quarter of 1997 was spurred by the rise in real GDP in excess of potential and by the resulting prospect of hikes in the Federal Reserve's target for the federal funds rate. The Federal Reserve decided at the end of March to increase its target for the federal funds rate by a modest 25 basis points to 5.5 percent. Other short-term rates, tending to move closely in tandem with the federal funds rate, increased modestly as well. In contrast, long-term rates rose more sharply, most likely on the expectation that further increases in short-term interest rates would be forthcoming.

During the second quarter of 1997, however, evidence of slowing economic growth and continued weakness in inflation caused interest rates to subside. Expectations that the Federal Reserve would need to make additional hikes in short-term interest rates ebbed. Consequently, long-term rates, which had risen the most, fell back sharply to levels that prevailed at the start of the year.

Lower-than-expected deficits may also have played a role in the decline of long-term rates during the second quarter, though it is difficult to say by how much. The initial move toward declining long-term rates coincided with news of lower-than-expected growth in employment costs, a closely watched indicator of potential inflation. Subsequent declines in long-term rates coincided with other news about near-term growth and inflation. In contrast, most of the good news about the lower-than-expected deficits emerged only gradually. By the end of April, it was fairly clear that the deficit for 1997 would be lower than previously estimated. Since long-term interest rates were still relatively high at that time, attributing their subsequent decline to a lowering of the deficit would be dicey.

During the second half of 1997, when CBO expects the economy to strengthen a bit from its second-quarter pace and the underlying inflation rate to pick up slightly, the Federal Reserve may again modestly raise its target for the federal funds rate. With inflation expected to rise, raising the federal funds rate would help to keep real short-term interest rates from falling below

Box 1.**The Economic Effects of the Budget Reconciliation Package**

The Congressional Budget Office estimates that current policy will eliminate the deficit by fiscal year 2002 and produce small surpluses through 2007 as a result of an improved economic outlook and passage of the budget reconciliation package—the Balanced Budget Act of 1997 and the Taxpayer Relief Act of 1997. The package cuts the deficit by decreasing the projected growth of spending, even though certain tax reductions offset part of that decrease. The principal changes in tax law provide lower rates on capital gains, new and expanded individual retirement accounts (IRAs), reduced exposure to the estate tax and the alternative minimum tax, incentives for postsecondary education, and credits for children under the age of 17. Some tax provisions will raise revenue—mainly by altering and extending the airline ticket tax through 2007. Although the legislation may affect most people, its overall impact on the economy in the next 10 years is likely to be very small.

General Considerations

The economic effects of the package will stem largely from lower deficits. A deficit reduction raises national saving and leads to lower interest rates and higher gross domestic product (GDP). The deficit cuts under the new legislation, however, are too small relative to the economy to lead to a large increase in national output.

The new legislation may also affect the economy by changing marginal tax rates—those rates that apply to the last dollar earned. Lower marginal taxes on income from labor or capital are likely to encourage people to work more or consume less. Some provisions directly change effective marginal rates—for instance, the new law reduces the statutory tax on capital gains. Other provisions modify marginal rates indirectly by phasing out credits, deductions, or exclusions according to income. Taxpayers who fall in the phaseout range will pay more tax than otherwise on an extra dollar of income. Overall, changes in marginal tax rates under the new law should have little effect on work or saving—the changes are individually small and partly offsetting.

People are also likely to change their behavior to the extent that the new legislation entails income gains or losses that occur apart from any changes in marginal

tax rates. Income gains allow people to work less and consume more; losses have the opposite effect.

Many aspects of the reconciliation package provide income gains. Some provisions reduce taxes and raise income by extending credits, deductions, or exclusions. For instance, the child credit raises the after-tax income of people with children. Similarly, the package allows people who would save or go to college even without new IRAs or incentives for education to reduce their taxes without changing their behavior. Provisions that change tax rates can also provide pure income gains in addition to changing marginal incentives. For example, the cut in the tax on capital gains enhances the income or wealth of people who have accrued capital gains on previous saving.

Other provisions effectively impose income losses. The package raises excise taxes, reduces payments to Medicare providers, and increases premiums paid by Medicare beneficiaries. On balance, the income losses exceed the gains. Thus, the overall result of those gains and losses will probably be to increase work and decrease consumption, although that net effect again will be small relative to the economy.

Selected Tax Provisions

Under the new legislation, the top rate on capital gains will drop from 28 percent to 20 percent for gains on the sale of assets held at least 18 months and will eventually fall to 18 percent for gains on assets held for at least five years. Those reductions will raise output slightly by raising the after-tax return on saving, thereby encouraging more saving. But the increase will be small because the new treatment reduces the overall effective tax rate on capital income by less than 1 percentage point, a much smaller reduction than the drop in the statutory rate on capital gains. The difference occurs because taxes on capital gains are deferred until an asset is sold and because the tax cut does not apply to about three-quarters of capital income—namely, capital gains held until death (which escape tax altogether), ordinary capital income (for instance, interest or dividends), and capital income paid to tax-exempt investors (such as pension funds).

The tax act raises the income eligibility limit for contributions to traditional IRAs and establishes so-called Roth or backloaded IRAs, under which many people can make taxable contributions but earn tax-free income in the accounts. The effect of traditional IRAs on saving is controversial: estimates of the amount of new saving they generate range from zero to over half of total IRA contributions.¹ Backloaded IRAs, which account for over half the potential increase in IRA contributions, provide no immediate tax benefit for contributions and are thus unlikely to be as effective in raising saving. Moreover, published estimates for the response of saving to IRAs are based on traditional rules for withdrawals. The tax act liberalizes those rules by allowing withdrawals for education expenses and first-time home purchases—provisions that will probably moderate any increase in saving by making IRAs more like ordinary savings accounts. Even if one-quarter of estimated new IRA contributions represented additional saving, that increase would add less than one-tenth of 1 percent to GDP by 2007.

The tax act also raises the exemption levels that apply to the estate tax and to the alternative minimum tax for small farms and businesses. For estates or businesses that fall between the old and new levels, the higher exemptions reduce marginal tax rates. For larger estates or businesses, the act slightly raises after-tax income and has no effect on the marginal tax rate; for smaller estates or businesses, the act has no effect at all. Even if the provisions did apply at the margin to everyone, they would reduce the overall effective tax rate on capital income by less than one-tenth of a percentage point and therefore could do little to raise national saving and output.

The incentives for education include tax credits for tuition at colleges and vocational schools, exclusions for earnings received from IRAs for education, and tax

deductions for interest paid on student loans. Those provisions apply largely to people (or parents of children) who would go to school anyway—72 percent of recent high school graduates already participate in postsecondary education within two years of graduation. Nevertheless, the incentives may encourage some of those who attend part time to attend half time or more and some of those who do not attend at all to do so.² In that case, labor supply will initially fall—more time in school is likely to mean less time at work. An increase in schooling, however, should eventually raise both productivity of labor and participation in the workforce, although those positive effects would probably remain negligible during the next 10 years. In sum, the incentives through 2007 will have a small positive effect on enrollment in postsecondary education, a modest positive effect on the intensity of participation in education, and a very small negative effect on total hours worked.

Although the tax credit for children does not affect the statutory tax rate on income, and its primary effect will be tied to gains in income as noted earlier, that tax credit will also change marginal incentives to work and save.³ Marginal incentives will fall for high-income families because the credit is phased out at a rate that is equivalent to imposing an extra 5 percent tax on their income. The overall effect will be small, however, because the phaseout now applies only to about 1 percent of earners. Moreover, the adverse impact will be partly offset by an increase in work effort among some low-income parents for whom the credit, which is not fully refundable, effectively raises their after-tax wage rate.

1. For a detailed discussion, see the following articles in *Journal of Economic Perspectives*, vol. 10, no. 4 (Fall 1996): James M. Poterba, Steven F. Venti, and David A. Wise, "How Retirement Saving Programs Increase Saving," pp. 91-112; Eric M. Engen, William G. Gale, and John Karl Scholz, "The Illusory Effects of Saving Incentives on Saving," pp. 113-138; and R. Glenn Hubbard and Jonathon S. Skinner, "Assessing the Effectiveness of Saving Incentives," pp. 73-90.

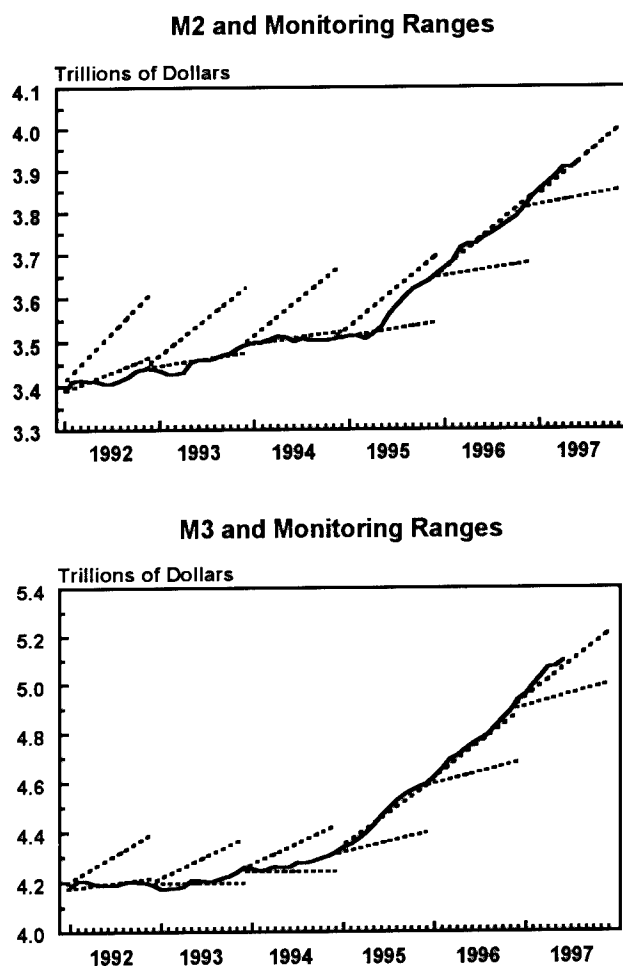
2. For estimates of the increase in school enrollment under the Administration's HOPE scholarship program, which was more generous than the provisions of the Taxpayer Relief Act of 1997, see Steven V. Cameron and James J. Heckman, "Summary of Main Findings" (unpublished paper presented to the Conference on Financing College Tuition hosted by the American Enterprise Institute in Washington, D.C., on May 15, 1997); and Jane Gravelle and Dennis Zimmerman, *Tax Subsidies for Higher Education: An Analysis of the Administration's Proposal*, CRS Report for Congress, 97-581 E (Congressional Research Service, May 30, 1997).

3. For a review of the evidence on the sensitivity of labor supply to changes in taxes, see Congressional Budget Office, *Taxes and Labor Supply*, CBO Memorandum (January 1996).

current levels and keep monetary policy modestly restrictive through 1998.

An additional indication that actions by the Federal Reserve may lie ahead comes from the behavior of the money-supply measures known as M2 and M3. They have been growing at or above their upper-monitoring ranges this year, as they did in 1996 (see Figure 12). The Federal Reserve views growth of those monetary aggregates near the upper band of their monitoring ranges as potentially inconsistent with the goal of stable prices and sustained expansion of the economy, as Federal Reserve Board Chairman Alan Greenspan noted in his monetary policy testimony to the Congress in July.

Figure 12.
The M2 and M3 Definitions of the Money Supply
and Their Monitoring Ranges



SOURCES: Congressional Budget Office; Federal Reserve Board.

The Economic Outlook

CBO expects the economy to grow through the end of 1998 in a pattern that closely resembles a consensus of forecasts. Real GDP growth will be slower in 1998 than in 1997, while inflation and short-term interest rates will be higher. After 1998, CBO's projection includes the economic effects of this year's reconciliation legislation, and consequently shows a higher level of output and lower interest rates than in CBO's projection last January.

The Forecast Through 1998

According to CBO's new forecast, the economy will grow at a robust pace in 1997 and then slow to a moderate pace in 1998. Inflation will begin to rise during the second half of 1997 and continue to climb modestly through 1998. The brisk pace of economic growth in 1997 will push short-term interest rates higher through the first half of 1998.

Output. CBO expects real output to grow at 3.4 percent in 1997 and 2.1 percent in 1998. Growth in actual output should be above CBO's estimate of growth in potential output for the remainder of 1997 and then fall slightly below growth in potential output in 1998. By the end of 1997, output will be roughly 1.3 percent above its potential, whereas by the end of 1998 it will fall to roughly 0.7 percent above potential.

The healthy pace of growth in output in 1997 stems from strong growth in consumption and investment. The growth rates of those components of final demand are expected to decline slightly in 1998 but exceed the growth rate of GDP.

The real trade deficit for goods and services will continue to widen through the second half of 1998. Although the growth of exports is expected to reach an eight-year high of over 10 percent in 1997, growth of imports will be slightly greater.

Inflation and Unemployment. Growth in employment and the labor force should remain firm through 1998. The unemployment rate is expected to average 5.0 percent in 1997—a 24-year low—and 5.1 percent in 1998.

Table 3.
Comparison of Forecasts for 1997 and 1998

| | Actual ^a 1996 | Forecast | |
|---|-----------------------------|-------------|-------------|
| | | 1997 | 1998 |
| Fourth Quarter to Fourth Quarter (Percentage change) | | | |
| Nominal GDP | | | |
| CBO | 5.6 | 5.0 | 4.4 |
| <i>Blue Chip</i> | 5.6 | 5.2 | 4.7 |
| Federal Reserve ^b | 5.0 | 5.0 to 5.5 | 4.5 to 5.0 |
| Real GDP ^c | | | |
| CBO | 3.3 | 3.0 | 1.8 |
| <i>Blue Chip</i> | 3.3 | 3.0 | 2.2 |
| Federal Reserve ^b | 3.1 | 3.0 to 3.25 | 2.0 to 2.5 |
| GDP Price Index | | | |
| CBO | 2.2 | 2.0 | 2.6 |
| <i>Blue Chip</i> | 2.2 | 2.1 | 2.4 |
| Federal Reserve ^b | 2.1 | n.a. | n.a. |
| Consumer Price Index ^d | | | |
| CBO | 3.2 | 2.1 | 3.0 |
| <i>Blue Chip</i> | 3.2 | 2.2 | 2.9 |
| Federal Reserve ^b | 3.2 | 2.25 to 2.5 | 2.5 to 3.0 |
| Average Level in the Fourth Quarter (Percent) | | | |
| Civilian Unemployment Rate | | | |
| CBO | 5.3 | 5.0 | 5.3 |
| <i>Blue Chip</i> | 5.3 | 4.9 | 5.2 |
| Federal Reserve ^b | 5.3 | 4.75 to 5.0 | 4.75 to 5.0 |
| Calendar Year Average (Percent) | | | |
| Three-Month Treasury Bill Rate | | | |
| CBO | 5.0 | 5.2 | 5.4 |
| <i>Blue Chip</i> | 5.0 | 5.2 | 5.4 |
| Federal Reserve ^b | 5.0 | n.a. | n.a. |
| Ten-Year Treasury Note Rate | | | |
| CBO | 6.4 | 6.4 | 6.2 |
| <i>Blue Chip</i> | 6.4 | 6.5 | 6.5 |
| Federal Reserve ^b | 6.4 | n.a. | n.a. |

SOURCES: Congressional Budget Office; Capitol Publications, Inc., *Blue Chip Economic Indicators* (August 10, 1997); Federal Reserve Board.

NOTES: The *Blue Chip* forecasts through 1998 are based on a survey of 50 private forecasters.

n.a. = not available.

- a. The actual figures reported by CBO and the *Blue Chip* consensus incorporate the revisions to the national income and product accounts in July 1997. The Federal Reserve forecast does not.
- b. The Federal Reserve figures are the ranges—known as the central tendency—that include the majority of the forecasts of Federal Open Market Committee members and other Federal Reserve Bank presidents.
- c. Based on chained 1992 dollars.
- d. The consumer price index for all urban consumers.

CBO's estimate of the NAIRU is 5.8 percent. The forecast that unemployment will remain below 5.8 percent implies higher inflation through 1998, as pressures in the labor market work their way through to changes in the price of products. The current forecast shows inflation increasing but by less than would be expected, given the current and forecast unemployment rates relative to CBO's estimate of the NAIRU: the recent subdued behavior of inflation has increased the uncertainty associated with measures of demand pressures in the economy. The growth in the underlying rate of consumer inflation (CPI, less food and energy) will increase from 2.7 percent in 1997 to 3.1 percent in 1998. The growth in the GDP price index is expected to increase from 2.0 percent in 1997 to 2.4 percent in 1998.

Differences between the GDP-based and CPI measures of inflation affect budget forecasts. Indexed budget programs and personal income tax brackets are tied to CPI inflation, whereas projections of overall incomes (and thereby revenues) are most directly influenced by growth in the GDP price index. As a result, for a given rate of inflation in the GDP price index, a rise in the forecast for CPI inflation implies a higher deficit projection. Over the 1986-1996 period, inflation in the CPI exceeded growth in the GDP price index by an average of 0.4 percentage points. CBO's forecast maintains that difference through 1998.

Interest Rates. As a result of solid GDP growth in 1997 and rising inflation, CBO assumes that short-term interest rates will climb. The three-month Treasury bill rate is expected to increase to 5.5 percent by the fourth quarter of 1997—50 basis points above its current level. Long-term rates are expected to fall by 20 basis points from 1997 to 1998.

Comparison with Other Forecasts. For the most part, CBO's forecasts are close to the forecasts produced by the *Blue Chip* consensus and the Federal Reserve (see Table 3). All of the forecasts expect growth to be strong in 1997 and then recede slightly to a moderate pace in 1998. The 1997 growth rates for real GDP are at the bottom of the Federal Reserve's central-tendency range of 3 percent to 3.25 percent (the central tendency includes the majority of the forecasts of Federal Open Market Committee members and other Federal Reserve Bank presidents). The 1998 forecasts of the growth rate range from a low of 1.8 percent (CBO)

to a high of 2.5 percent (the upper limit of the Federal Reserve's central-tendency range).

The CBO and *Blue Chip* forecasts reflect the July revisions to the national income and product accounts. The Federal Reserve forecast was completed before those revisions.

The forecasts for inflation show a decline in 1997 and a rebound in 1998. Forecasts of CPI inflation on a fourth-quarter-to-fourth-quarter basis for 1997 range from a low of 2.1 percent (CBO) to a high of 2.5 percent, which is at the upper end of the Federal Reserve's central-tendency range. The CBO forecast for the growth of the GDP price index is slightly less in 1997 and greater in 1998 than the *Blue Chip* forecast.

All three forecasters expect the unemployment rate to fall in 1997 from its 1996 level, but CBO and the *Blue Chip* expect the unemployment rate to rise slightly in 1998, whereas the Federal Reserve indicates no change. Forecasters expect short-term interest rates to rise in 1997 and 1998 but foresee little change in long-term interest rates in 1997 and no change or a slight drop in 1998.

The Projections for 1999 Through 2007

CBO projects that growth in real GDP will average 2.3 percent during the 1999-2007 period, just slightly below the growth rate of potential output for that period (see Tables 4 and 5). The unemployment rate will average 5.9 percent during the same period, while inflation, as measured by the CPI, will average 3.1 percent. Interest rates are roughly constant in CBO's projection for that period; short-term rates average 4.4 percent and long-term rates 5.7 percent.

CBO's medium-term projections do not reflect any attempt to estimate cyclical movements of the economy during the 1999-2007 period. Instead, the projections are designed to approximate the level of economic activity on average. CBO uses historical relationships to identify trends in factors underlying the economy, including the growth of the labor force, the rate of national saving, and the growth of productivity. The projections of real GDP, inflation, and real interest rates are then based on the trends in those fundamental factors.

Projections for Growth. CBO's forecast for economic growth leaves real GDP at roughly 0.7 percent above potential GDP by the end of 1998. CBO projects that rising short-term interest rates in 1997 will slow the economy, allowing real GDP to reach its average historical relationship with potential GDP by 2002.

Projections for Inflation. CBO projects that inflation, as measured by the CPI, will average about 3.1 percent from 1999 through 2007, and the GDP price index will

advance at an average rate of 2.6 percent. The difference between the growth rates of the CPI and the GDP price index—0.4 percentage points—is similar to the average difference that prevailed between the two measures of inflation during the late 1980s and early 1990s.

Projections for Interest Rates. CBO projects interest rates by combining a projection for real rates with the projection for inflation. Real interest rates are projected to approach their levels of the 1960s, a period

Table 4.
Economic Projections for Calendar Years 1997 Through 2007

| | Actual 1996 | Forecast | | Projected | | | | | | | | |
|---|----------------|----------|-------|-----------|-------|-------|--------|--------|--------|--------|--------|--------|
| | | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Nominal GDP (Billions of dollars) | 7,636 | 8,053 | 8,415 | 8,802 | 9,223 | 9,672 | 10,165 | 10,684 | 11,227 | 11,794 | 12,388 | 13,011 |
| Nominal GDP (Percentage change) | 5.1 | 5.5 | 4.5 | 4.6 | 4.8 | 4.9 | 5.1 | 5.1 | 5.1 | 5.1 | 5.0 | 5.0 |
| Real GDP (Percentage change) | 2.8 | 3.4 | 2.1 | 1.9 | 2.1 | 2.2 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 |
| GDP Price Index (Percentage change) | 2.3 | 2.0 | 2.4 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 |
| CPI ^a (Percentage change) | 2.9 | 2.4 | 2.7 | 3.0 | 3.0 | 3.0 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| Unemployment Rate (Percent) | 5.4 | 5.0 | 5.1 | 5.5 | 5.8 | 5.9 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Three-Month Treasury Bill Rate (Percent) | 5.0 | 5.2 | 5.4 | 4.7 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| Ten-Year Treasury Note Rate (Percent) | 6.4 | 6.4 | 6.2 | 5.8 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 |
| Tax Bases (Billions of dollars) | | | | | | | | | | | | |
| Corporate profits | 736 | 767 | 768 | 775 | 789 | 801 | 825 | 853 | 887 | 922 | 959 | 1,001 |
| Wage and salary disbursements | 3,633 | 3,864 | 4,054 | 4,242 | 4,447 | 4,665 | 4,904 | 5,156 | 5,421 | 5,698 | 5,988 | 6,293 |
| Other taxable income | 1,693 | 1,782 | 1,854 | 1,918 | 1,985 | 2,068 | 2,161 | 2,261 | 2,367 | 2,477 | 2,593 | 2,714 |
| Tax Bases (Percentage of GDP) | | | | | | | | | | | | |
| Corporate profits | 9.6 | 9.5 | 9.1 | 8.8 | 8.6 | 8.3 | 8.1 | 8.0 | 7.9 | 7.8 | 7.7 | 7.7 |
| Wage and salary disbursements | 47.6 | 48.0 | 48.2 | 48.2 | 48.2 | 48.2 | 48.2 | 48.3 | 48.3 | 48.3 | 48.3 | 48.4 |
| Other taxable income | 22.2 | 22.1 | 22.0 | 21.8 | 21.5 | 21.4 | 21.3 | 21.2 | 21.1 | 21.0 | 20.9 | 20.9 |

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

a. The consumer price index for all urban consumers.

when inflation rates and federal deficits were not too different from what CBO now projects. Real long-term interest rates decline through the end of 2001, settling at a rate of about 2.6 percent in 2002 and thereafter. Combined with an inflation rate of 3.1 percent, that level implies a nominal rate of 5.7 percent. The three-month Treasury bill rate averages 4.4 percent during the 1999-2007 period, which implies a real rate of 1.3 percent, the same as its average during the late 1950s and early 1960s.

Projections for Income Shares. CBO projects that the share of GDP that falls into the main taxable income categories—wages and salaries, corporate profits, and other taxable income—will decline steadily from 79.6 percent in 1997 to 76.9 percent in 2007. The primary reason for the projected decline in the taxable share is a projected increase in the share of GDP devoted to depreciation (wear and tear on business equipment and structures), which stems from the recent boom in investment. Since depreciation goes untaxed,

Table 5.
Economic Projections for Fiscal Years 1997 Through 2007

| | Actual 1996 | Forecast | | Projected | | | | | | | | |
|---|----------------|----------|-------|-----------|-------|-------|--------|--------|--------|--------|--------|--------|
| | | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Nominal GDP (Billions of dollars) | 7,533 | 7,955 | 8,324 | 8,700 | 9,116 | 9,555 | 10,039 | 10,552 | 11,089 | 11,650 | 12,237 | 12,852 |
| Nominal GDP (Percentage change) | 4.7 | 5.6 | 4.6 | 4.5 | 4.8 | 4.8 | 5.1 | 5.1 | 5.1 | 5.1 | 5.0 | 5.0 |
| Real GDP (Percentage change) | 2.4 | 3.4 | 2.4 | 1.8 | 2.1 | 2.1 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 |
| GDP Price Index (Percentage change) | 2.3 | 2.1 | 2.2 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 |
| CPI ^a (Percentage change) | 2.8 | 2.7 | 2.5 | 3.0 | 3.0 | 3.0 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| Unemployment Rate (Percent) | 5.5 | 5.1 | 5.0 | 5.5 | 5.7 | 5.9 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Three-Month Treasury Bill Rate (Percent) | 5.1 | 5.0 | 5.5 | 4.9 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| Ten-Year Treasury Note Rate (Percent) | 6.3 | 6.4 | 6.2 | 5.9 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 |
| Tax Bases (Billions of dollars) | | | | | | | | | | | | |
| Corporate profits | 720 | 763 | 766 | 772 | 786 | 797 | 818 | 845 | 879 | 913 | 949 | 991 |
| Wage and salary disbursements | 3,576 | 3,810 | 4,008 | 4,193 | 4,395 | 4,608 | 4,843 | 5,092 | 5,353 | 5,627 | 5,914 | 6,215 |
| Other taxable income | 1,669 | 1,760 | 1,836 | 1,902 | 1,966 | 2,046 | 2,137 | 2,236 | 2,340 | 2,449 | 2,563 | 2,683 |
| Tax Bases (Percentage of GDP) | | | | | | | | | | | | |
| Corporate profits | 9.6 | 9.6 | 9.2 | 8.9 | 8.6 | 8.3 | 8.2 | 8.0 | 7.9 | 7.8 | 7.8 | 7.7 |
| Wage and salary disbursements | 47.5 | 47.9 | 48.1 | 48.2 | 48.2 | 48.2 | 48.2 | 48.3 | 48.3 | 48.3 | 48.3 | 48.4 |
| Other taxable income | 22.2 | 22.1 | 22.1 | 21.9 | 21.6 | 21.4 | 21.3 | 21.2 | 21.1 | 21.0 | 20.9 | 20.9 |

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

a. The consumer price index for all urban consumers.

an increase in the share of depreciation tends to depress the taxable share of gross income.

Another source of the decline in the taxable share is an increase in the share of GDP composed of fringe benefits—untaxed forms of compensation such as employer-paid health and life insurance, pension benefits, and unemployment compensation. The benefit share of GDP has been falling in recent years, largely because the growth in medical costs has been restrained by a shift among employers toward managed care plans. However, as the proportion of employees covered by managed care increases, the scope for further savings diminishes. As a result, the benefit share of GDP is expected to rise in 1999 and thereafter.

The share of GDP paid in the form of wages and salaries is almost flat in CBO's projection, rising from 48 percent of GDP in 1997 to 48.4 percent in 2007. However, the rise in the benefit share—offset slightly by a decrease in the projection of employer contributions for social insurance—is enough to increase the projection for labor compensation as a share of GDP from 58.2 percent in 1997 to 58.8 percent in 2007.

A Comparison of January's Outlook with the Current Outlook

CBO's current (September 1997) outlook differs from its January baseline (see Table 6). In the September outlook, real GDP growth, the level of nominal GDP, and the tax bases are higher and interest rates after 1998 are lower. In addition, the outlook for the unemployment rate is lower in the current forecast.

The current outlook differs for two reasons. First and most important, new information about the economy has become available since the January outlook. That outlook was based on information through the third quarter of 1996. The current outlook is based on information through the second quarter of 1997 and rebenchmarked data going back to 1993 (see Box 2). Second, the current outlook incorporates the effects of the enacted budget reconciliation package of 1997.

The current forecast for real growth in 1997 is higher than the January forecast because economic

growth for the first half of 1997 was in fact higher than previously expected. Growth is expected to moderate in 1998 to about what was expected last January. The current forecast for CPI inflation shows a decline in 1997 and a slight rebound in 1998. In January, inflation was expected to remain roughly constant through 1998. The difference in the forecasts for inflation is primarily the result of the decline in food and energy prices in the first half of 1997.

The growth path for real GDP during the 1999-2007 period is also higher than the January baseline—about 0.2 percentage points higher. One reason is that the fiscal outlook has changed in part because of this year's budget reconciliation legislation: the current projection assumes a balanced budget by 2002, whereas the January baseline projection did not.

The growth dividend that stems from assuming a balanced budget accounts for about one-third of the upward revision. Another third of the upward revision stems from revised projections for the growth in hours worked and real investment. The projections for hours and investment were revised upward largely because of newly released data and revised historical data. The remaining third of the upward revision to real GDP is the result of an adjustment made to the growth of potential output to reflect technical adjustments to the CPI and the GDP price index.

The technical adjustments are necessary because the Bureau of Labor Statistics has announced that it will make two changes to its method for calculating the CPI and its component indexes (see Appendix B). Those changes, which will reduce the measured growth of prices, are reflected in CBO's projections for the CPI and the GDP price index. However, such changes will have no effect on the future growth of total expenditures in the economy. Consequently, CBO's projections of nominal GDP should be unaffected by them. To maintain the same projection for nominal GDP in the face of a lower projection for the growth of the GDP price index, the growth of real GDP must be adjusted upward on a one-for-one basis to offset the effects of lower inflation on nominal GDP. CBO's projection for the growth of potential output therefore includes a technical upward adjustment of 0.1 percentage point, beginning in 1999.

Table 6.
Comparison of Economic Projections, Calendar Years 1996-2007

| | Actual 1996 | Forecast | | Projected | | | | | | | | |
|---|----------------|----------|-------|-----------|-------|-------|--------|--------|--------|--------|--------|--------|
| | | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| Nominal GDP | | | | | | | | | | | | |
| (Billions of dollars) | | | | | | | | | | | | |
| CBO September | 7,636 | 8,053 | 8,415 | 8,802 | 9,223 | 9,672 | 10,165 | 10,684 | 11,227 | 11,794 | 12,388 | 13,011 |
| CBO January | 7,570 | 7,916 | 8,277 | 8,678 | 9,097 | 9,532 | 9,984 | 10,453 | 10,938 | 11,443 | 11,969 | 12,518 |
| Nominal GDP | | | | | | | | | | | | |
| (Percentage change) | | | | | | | | | | | | |
| CBO September | 5.1 | 5.5 | 4.5 | 4.6 | 4.8 | 4.9 | 5.1 | 5.1 | 5.1 | 5.1 | 5.0 | 5.0 |
| CBO January | 4.4 | 4.6 | 4.6 | 4.9 | 4.8 | 4.8 | 4.7 | 4.7 | 4.6 | 4.6 | 4.6 | 4.6 |
| Real GDP | | | | | | | | | | | | |
| (Percentage change) | | | | | | | | | | | | |
| CBO September | 2.8 | 3.4 | 2.1 | 1.9 | 2.1 | 2.2 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 |
| CBO January | 2.3 | 2.3 | 2.0 | 2.2 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 |
| GDP Price Index | | | | | | | | | | | | |
| (Percentage change) | | | | | | | | | | | | |
| CBO September | 2.3 | 2.0 | 2.4 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 |
| CBO January | 2.1 | 2.3 | 2.5 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| Consumer Price Index^a | | | | | | | | | | | | |
| (Percentage change) | | | | | | | | | | | | |
| CBO September | 2.9 | 2.4 | 2.7 | 3.0 | 3.0 | 3.0 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| CBO January | 2.9 | 2.9 | 2.9 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.1 | 3.1 | 3.1 |
| Civilian Unemployment | | | | | | | | | | | | |
| Rate (Percent) | | | | | | | | | | | | |
| CBO September | 5.4 | 5.0 | 5.1 | 5.5 | 5.8 | 5.9 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| CBO January | 5.4 | 5.3 | 5.6 | 5.8 | 5.9 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Three-Month Treasury | | | | | | | | | | | | |
| Bill Rate (Percent) | | | | | | | | | | | | |
| CBO September | 5.0 | 5.2 | 5.4 | 4.7 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| CBO January | 5.0 | 5.0 | 5.0 | 4.9 | 4.7 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 |
| Ten-Year Treasury | | | | | | | | | | | | |
| Note Rate (Percent) | | | | | | | | | | | | |
| CBO September | 6.4 | 6.4 | 6.2 | 5.8 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 |
| CBO January | 6.4 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 |
| Tax Bases | | | | | | | | | | | | |
| (Percentage of GDP) | | | | | | | | | | | | |
| Corporate profits | | | | | | | | | | | | |
| CBO September | 9.6 | 9.5 | 9.1 | 8.8 | 8.6 | 8.3 | 8.1 | 8.0 | 7.9 | 7.8 | 7.7 | 7.7 |
| CBO January | 8.5 | 8.3 | 8.2 | 8.0 | 7.8 | 7.6 | 7.5 | 7.5 | 7.4 | 7.4 | 7.4 | 7.4 |
| Wages and salaries | | | | | | | | | | | | |
| CBO September | 47.6 | 48.0 | 48.2 | 48.2 | 48.2 | 48.2 | 48.2 | 48.3 | 48.3 | 48.3 | 48.3 | 48.4 |
| CBO January | 47.9 | 48.0 | 47.7 | 47.6 | 47.4 | 47.3 | 47.3 | 47.2 | 47.2 | 47.1 | 47.1 | 47.1 |

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board; Department of Labor, Bureau of Labor Statistics.

NOTE: Percentage change is year over year.

a. The consumer price index for all urban consumers.

Box 2.**The July 1997 Revisions to the National Income and Product Accounts**

In late July, the data in the national income and product accounts (NIPAs) for the past four years were revised, and the revised data present a significantly different picture of the economy. Nominal gross domestic product (GDP) grew faster between 1992 and early 1997 than previously indicated, inflation-adjusted GDP grew slightly faster, and the GDP price index now indicates that more inflation occurred than previously thought, particularly during 1996.

Revisions were large in some income categories. Profits and dividends as shares of GDP were revised upward sharply, and nonwage labor compensation was revised downward. Because profits and dividends are higher, the new data are more compatible with the rapid increase in the stock market over the past two years. They also help to explain the strong growth in tax liabilities in 1996. Moreover, the data for consumption appear more reasonable given the increase in household wealth. Nevertheless, the revisions do not imply a significant upward revision in the growth of productivity over the last few years, as some analysts anticipated, nor do they fully explain the rapid growth in federal revenues this year.

The level of nominal GDP is higher throughout the revision period (1993 through the first quarter of 1997), culminating in a \$63 billion higher level in the first quarter of 1997 than previously published. Real (inflation-adjusted) GDP was revised up by a trivial amount in the first quarter of this year—only \$7 billion. Hence, the bulk of the higher nominal GDP stems from a higher level of the GDP price index. Although the revision to real GDP growth on average was not large, the revision for 1996 was significant. Real GDP growth is 0.3 percentage points higher in 1996 in the new data, and growth in the GDP deflator was also revised up by 0.3 percentage points.

The most interesting revisions were in the income categories. GDP can be disaggregated into income categories, such as profits, wages and salaries, nonwage benefits, interest income, and proprietors' incomes. Economic profits were revised up dramatically in 1995 and 1996. Profits were \$67 billion, or about 9 percent, greater in the first quarter of 1997 than previously reported. Furthermore, profits as a share of GDP in 1996 were 0.8 percentage points higher than previously indicated, although the profits on which corporations pay income taxes were revised up by less than half of the amount of the revision to

economic profits. Dividends were also revised upward by about \$61 billion in 1996. Wages and salaries were not revised significantly, but nonwage benefits to workers were revised downward sharply for 1995 through the first quarter of 1997. Most of that downward revision is the result of a reduction in the estimate of the medical benefits that employers pay. A number of factors account for the downward trend: firms have been switching to lower-cost managed care, the percentage of workers who have health care coverage is lower than in the late 1980s, workers are making larger copayments, and the growth of insurance premiums slowed sharply in 1995 and 1996.

An upward revision in nominal GDP had been expected. During 1996 and the first half of 1997, tax receipts were unusually high compared with the previously reported NIPA levels for profits and personal income. The upward revision to those categories helps to explain tax revenues for 1996, but the revision only partly explains the high level of receipts this year.

Upward revisions in real GDP growth and personal consumption were also anticipated. Many analysts argued that the rapid growth in business profits in 1995 and 1996 implied a faster rate of growth in productivity. The revision in the growth rate of real GDP was small, however, so the growth in productivity was not revised upward significantly. Instead, the downward revision in benefits paid to labor partly explains the rapid growth in profits.

Many economists believe that a small part (about 4 percent) of an increase in wealth is used to increase personal consumption—that is known as a "wealth effect" on consumption spending. It was therefore expected that the boom in financial markets would have generated an increase in household wealth during 1995 and 1996, which in turn would have boosted consumption relative to income and reduced the saving rate. The previous NIPA data did not indicate any such wealth effect. However, the growth in consumption was revised upward relative to personal income in the revised data, supporting the idea of a wealth effect on consumption.

The next large revision of the NIPA data is scheduled for July 1998. The 1995-1997 data will be subject to revision at that time. Therefore, some of the remaining questions about those years, such as the strength in tax receipts and the relatively slow growth in productivity, may be resolved at that time.

The current outlook for the unemployment rate for the 1997-1999 period is significantly lower than the January forecast. Although the January forecast called for a drop in the unemployment rate in 1997, the size of the drop during the first half of 1997 was unexpectedly large. For the later years, however, the projected unemployment rate is the same as in January.

In January, CBO expected interest rates to remain roughly constant through 1998 because economic output was anticipated to remain only slightly above potential. The unexpectedly high growth in the first half of 1997 prompted CBO to raise its forecast for short-term interest rates in 1997 and 1998—but in the projection period, interest rates are lower. The forecast for long-term interest rates was also raised slightly for 1997 but reduced below the previous projection by 1999. Interest rates are lower in the later years largely because of the effect of smaller deficits on interest rates.

Nominal GDP and the tax bases are much higher, particularly in the projection period. The NIPA revision raised the level of nominal GDP in early 1997 by \$63 billion, and the effect of that revision carries throughout the forecast and projection years. Also increasing the growth of nominal GDP are the revisions to the growth of real GDP that came from new data on the rise in the number of hours worked and investment in recent years, as well as from the positive effects of deficit reduction.

The NIPA income categories that are most important for projecting revenues—corporate profits and wage and salary disbursements—are much larger in the September outlook than in January. The upward revisions in those income categories largely occurred for the same reasons as the higher nominal GDP. In addition, deficit reduction will, by reducing interest rates, tend to increase the share of GDP accounted for by profits. The wage and salary share is larger in the current outlook in part because the rate of growth of nonwage compensation is smaller than projected in January.

Risks to the Economic Outlook

CBO's forecast reflects its view of the most likely, but certainly not the only, path for the economy through

1998. Embodied in the current CBO forecast are assumptions that interest rates will rise and that economic growth will slow to a moderate but sustainable pace by the second half of 1998.

A potential risk to the forecast is that economic growth may increase in the second half of 1997 and early 1998, thus putting further upward pressure on inflation. A related risk is that if the temporary factors that CBO believes could be masking inflationary pressures suddenly dissipate, inflation could rise sharply. Alone or in combination, either of those events would probably prompt the Federal Reserve to raise interest rates higher than CBO already expects, thereby increasing the risk of a significant slowdown or recession in the economy by the end of 1998. Monetary restraint has often precipitated recessions in the past.

Another possible risk to the current forecast is that CBO has underestimated the rate of growth of potential output because of a surge in the growth of productivity that has not been accounted for in government statistics on productivity. Should that be the case, the economy could sustain a rate of growth in output higher than CBO assumes without igniting inflation. If that scenario came to pass, CBO's forecast for interest rates and inflation would be too high and its income projections too low.

A third possible risk is that the stock market could decline significantly. Recent rises in the stock market have pushed the earnings yield (earnings as a percentage of price) on the Standard & Poor's 500 index down almost to the yield on short-term safe assets such as Treasury bills. Typically, the earnings yield on stocks exceeds the yield on safe assets. The occasional disappearance or even reversal of that spread is not unprecedented. However, it has usually happened near the end of economic expansions or just before a decline in the stock market.

Although corrections in the stock market of 20 percent to 30 percent are rare, they are not unprecedented. Nevertheless, based on the experience of the 1987 stock market crash, when the Dow Jones industrial average fell by almost 23 percent in one day, corrections of that magnitude by themselves need not severely affect overall economic activity. Therefore, even a severe correction might only slow growth slightly.

Aside from the specific risks mentioned thus far, always a possibility is the risk that the economy will deviate from the path assumed in CBO's forecast and projection. The forecast and projection are estimates, and estimates are subject to error. Those errors occur as unforeseen factors push the economy either above or below the assumed path.

Although the direction and magnitude of the errors are uncertain, the possibility of large errors definitely grows over time. Thus, CBO's projection of the economy in 2002 is much less certain than its forecast of the economy in 1998. The economic and budget outlook should therefore be interpreted in light of those possible deviations. As pointed out in CBO's *Economic and Budget Outlook* in January, typical-size fluctuations can easily increase or decrease the budget deficit by over \$100 billion in a single year.

The Budget Outlook

The combination of a strong economy and the enactment of a package of major policy changes has significantly improved the budget outlook. As a result, the Congressional Budget Office (CBO) estimates that in 2002, under current policies, the federal budget will be balanced for the first time since 1969. From a 23-year low of \$34 billion this year, the deficit is expected to increase to \$57 billion in 1998, decline gradually from 1999 to 2001, and then switch to a surplus of \$32 billion in 2002. If current policies remain in place and the economy stays on an even keel, the budget is projected to remain in surplus for the five years through 2007. However, a burst of entitlement spending and a return to budget deficits are likely to be lurking just over the horizon as the baby-boom generation begins to enter retirement age in 2008.

The low deficit in 1997—fueled primarily by a substantial increase in revenues—has been affected very little by policies enacted this year. Boosted by unexpectedly high final payments on 1996 income tax liabilities, as well as income and payroll taxes withheld for 1997, total revenues for the year are expected to increase 8.6 percent from last year. Part of that unexpected growth is attributable to the strength of the economy, but a significant amount stems from other factors such as the timing of payments and more income being taxed at higher tax rates. In addition, the strong economy and various other factors have restrained spending in some income assistance programs, thereby contributing to the steep decline in the 1997 deficit.

Without the changes in policies agreed to by the Congress and the President, however, the budget would probably not reach balance. This year's reconciliation

legislation—the Balanced Budget Act of 1997 and the Taxpayer Relief Act of 1997—on balance provides enough savings in mandatory spending and restraints in discretionary spending to bring projected deficits down by \$118 billion (net of tax cuts) through 2002. Net policy changes of \$95 billion in that year provide the final shove from deficit to surplus.

Relatively low deficits for the next few years and small surpluses in the beginning of the 21st century would cause the federal government to draw substantially less from private credit markets than it has in recent years. Debt held by the public relative to the size of the economy would drop from its current level of nearly 50 percent of gross domestic product (GDP) to 30 percent by 2007, a level unseen since the early 1980s. As a result, interest payments and interest rates should drop, thereby making more resources available for private investment and enhancing productivity and economic growth.

There is no guarantee that deficits will disappear, however. Extending pay-as-you-go constraints on new direct (mandatory) spending and revenue legislation and the enforceable limits on discretionary spending through 2002 will reduce the likelihood that future legislation will undo the promised deficit reduction (see Appendix C, "Sequestration Update Report for Fiscal Year 1998," for more information on budget enforcement procedures). Nevertheless, an economy that is weaker than anticipated or entitlement spending that grows more rapidly than expected could push deficits up. In addition, maintaining the fiscal discipline necessary to adhere to the discretionary caps may be difficult in the face of a near-freeze on such spending for another five years and pressures to increase spending on

such items as transportation infrastructure, education, and the replacement of aging military equipment. In any case, deficits or surpluses that differ by \$100 billion from current projections are entirely possible. Chapter 3 of CBO's *The Economic and Budget Outlook: Fiscal Years 1998-2007* (January 1997) reviews the inherent uncertainty in budget projections.

This chapter presents CBO's outlook for the federal budget under the economic forecast described in Chapter 1 and the policies currently in place. It summarizes the effect of the two reconciliation acts and other changes that have occurred since CBO's March baseline was published. The chapter concludes with the budget estimates displayed in the framework of the national income and product accounts, which economists use to analyze the government's activities.

The Deficit Outlook

CBO estimates that the total deficit this year will fall to \$34 billion, a decline of \$73 billion from the 1996 level (see Table 7). That deficit figure represents just 0.4 percent of GDP, which is a substantially smaller share than the 4.7 percent recorded just five years ago.

The deficit is not projected to fall below the 1997 level until 2002, when a surplus of \$32 billion is expected. Next year, the deficit is expected to rise moderately, partly because the reconciliation package increases spending and decreases revenues. Overall, the legislation will increase the deficit by \$21 billion in 1998 before beginning to diminish it. Growth in out-

Table 7.
The Deficit Outlook Under Current Policies (By fiscal year)

| | Actual 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--|----------------|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| In Billions of Dollars | | | | | | | | | | | | |
| Baseline Total Deficit (-) or Surplus | -107 | -34 | -57 | -52 | -48 | -36 | 32 | 13 | 29 | 36 | 72 | 86 |
| On-Budget Deficit (Excluding Social Security and Postal Service) | -174 | -114 | -145 | -154 | -158 | -149 | -88 | -115 | -108 | -114 | -85 | -82 |
| Memorandum: | | | | | | | | | | | | |
| Off-Budget Surplus | | | | | | | | | | | | |
| Social Security | 66 | 81 | 91 | 100 | 108 | 113 | 120 | 128 | 137 | 150 | 157 | 168 |
| Postal Service | <u>1</u> | <u>-2</u> | <u>-3</u> | <u>1</u> | <u>1</u> | <u>1</u> | <u>a</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Total | 67 | 79 | 88 | 101 | 110 | 113 | 120 | 128 | 137 | 150 | 157 | 168 |
| Deficit (-) or Surplus If Discretionary Spending Was Frozen at the 2002 Level from 2003 to 2007 | -107 | -34 | -57 | -52 | -48 | -36 | 32 | 31 | 66 | 94 | 152 | 191 |
| As a Percentage of GDP | | | | | | | | | | | | |
| Baseline Total Deficit (-) or Surplus | -1.4 | -0.4 | -0.7 | -0.6 | -0.5 | -0.4 | 0.3 | 0.1 | 0.3 | 0.3 | 0.6 | 0.7 |

SOURCE: Congressional Budget Office.

a. Less than \$500 million.

lays is forecast to rise from 3.3 percent this year to 4.9 percent in 1998. That growth is spurred by \$12 billion in additional spending provided by the reconciliation acts and by continued, relatively rapid growth in programs such as Medicare and Medicaid. The rate of revenue growth, however, is expected to fall from 8.6 percent in 1997 to 3.6 percent in 1998. The reconciliation legislation will reduce revenues by \$9 billion next year. Also, CBO does not foresee revenues continuing to grow at the rapid pace of the past few years, largely because the 1993 tax increase is completely phased in, the temporary factors boosting this year's growth are fading, and slower economic growth is projected for next year.

After 2002, modest budget surpluses are projected to continue. Although CBO expects the surplus to decline to \$13 billion in 2003, under current policies it could rise to \$86 billion in 2007. The good news is likely to be fleeting, however. In 2008, the first of the baby boomers will turn 62 years old and thus become eligible to claim early retirement under Social Security. Three years later marks the start of their participation in Medicare, the major health program for the elderly. Without further action to restrain the growth of those entitlement programs, a deficit is likely to reappear sometime thereafter. See *Long-Term Budgetary Pressures and Policy Options* (March 1997) for more information on CBO's view of the long-term budget outlook.

Another measure of the deficit that is sometimes used is the on-budget deficit, which excludes the transactions of the Social Security trust funds (Old-Age and Survivors Insurance and Disability Insurance) and the Postal Service. That measure of the deficit has little utility from an economic perspective; although designated as off-budget, the trust fund and postal transactions affect the economy as much as other governmental spending and receipts. Because it excludes the Social Security funds, which continue to run large surpluses, the on-budget deficit declines to \$88 billion in 2002 rather than balancing. Similar deficits remain from 2003 through 2007.

Those trust fund surpluses will diminish rapidly once the baby boomers enter retirement. As benefit payments begin to outstrip receipts, the trust funds will have smaller surpluses, and the on-budget deficit will more closely resemble the total deficit.

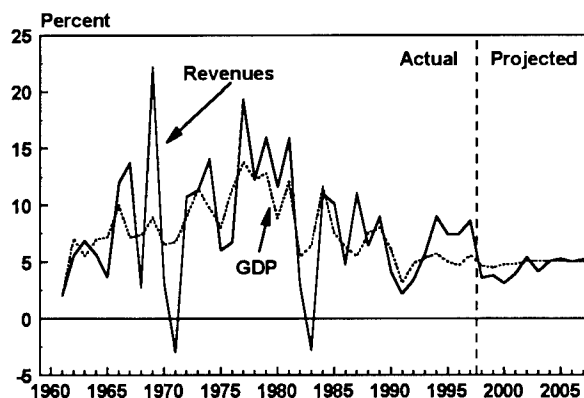
Revenue and Spending Projections

Federal revenues are expected to be \$1,578 billion in 1997, an increase of \$125 billion over 1996 (see Table 8). As a share of GDP, revenues will total 19.8 percent this year, the highest level since the end of World War II. That percentage is expected to dwindle over the next few years. Revenues are projected to equal 19.0 percent of GDP in 2003 and remain at that level through 2007.

The relative importance of each source of revenue should remain fairly constant throughout the projection period. Individual income taxes are expected to hover around 9 percent of GDP over the next 10 years. Under CBO's projections, social insurance taxes total nearly 7 percent of GDP in each year through 2007, and corporate income taxes average around 2 percent of GDP.

Federal revenues tend to grow in tandem with the economy, as measured by nominal GDP (see Figure 13). However, temporary factors, such as changes in tax law or in the growth of taxable income relative to that of GDP, often cause growth of revenues and the economy to diverge from that pattern. Over the past

Figure 13.
Growth of Federal Revenues and GDP



SOURCE: Congressional Budget Office.

Table 8.
CBO Baseline Budget Projections, Assuming Compliance with Discretionary Spending Caps
(By fiscal year)

| | Actual 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--------------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| In Billions of Dollars | | | | | | | | | | | | |
| Revenues | | | | | | | | | | | | |
| Individual income | 656 | 735 | 757 | 771 | 792 | 829 | 879 | 921 | 975 | 1,033 | 1,095 | 1,160 |
| Corporate income | 172 | 185 | 187 | 190 | 193 | 194 | 197 | 202 | 208 | 216 | 225 | 234 |
| Social insurance | 509 | 539 | 567 | 593 | 623 | 650 | 683 | 714 | 750 | 792 | 827 | 870 |
| Other | 115 | 119 | 124 | 143 | 143 | 148 | 161 | 163 | 169 | 172 | 177 | 182 |
| Total | 1,453 | 1,578 | 1,635 | 1,698 | 1,751 | 1,821 | 1,920 | 2,000 | 2,101 | 2,214 | 2,324 | 2,447 |
| On-budget | 1,086 | 1,187 | 1,222 | 1,265 | 1,297 | 1,346 | 1,421 | 1,477 | 1,552 | 1,633 | 1,717 | 1,808 |
| Off-budget | 367 | 391 | 413 | 433 | 454 | 475 | 498 | 523 | 550 | 581 | 607 | 639 |
| Outlays | | | | | | | | | | | | |
| Discretionary | | | | | | | | | | | | |
| Defense | 266 | 271 | 270 | 276 | 287 | 289 | 301 | 310 | 319 | 332 | 339 | 345 |
| Domestic and international | 267 | 277 | 286 | 293 | 300 | 308 | 316 | 325 | 335 | 345 | 355 | 366 |
| Violent Crime Reduction | | | | | | | | | | | | |
| Trust Fund | 1 | 3 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 |
| Unspecified reductions | 0 | 0 | -4 | -13 | -26 | -36 | -61 | -61 | -62 | -67 | -65 | -64 |
| Subtotal | 534 | 550 | 556 | 561 | 566 | 565 | 561 | 579 | 597 | 615 | 634 | 654 |
| Mandatory spending | 858 | 902 | 968 | 1,019 | 1,075 | 1,142 | 1,195 | 1,272 | 1,347 | 1,444 | 1,509 | 1,609 |
| Offsetting receipts | -73 | -85 | -82 | -82 | -85 | -90 | -104 | -97 | -102 | -108 | -114 | -121 |
| Net interest | 241 | 245 | 250 | 251 | 244 | 239 | 236 | 233 | 230 | 227 | 223 | 219 |
| Total | 1,560 | 1,612 | 1,691 | 1,750 | 1,799 | 1,857 | 1,888 | 1,987 | 2,073 | 2,178 | 2,253 | 2,361 |
| On-budget | 1,260 | 1,300 | 1,367 | 1,418 | 1,455 | 1,496 | 1,510 | 1,592 | 1,660 | 1,747 | 1,802 | 1,891 |
| Off-budget | 300 | 312 | 324 | 332 | 345 | 361 | 378 | 395 | 413 | 431 | 450 | 471 |
| Deficit (-) or Surplus | -107 | -34 | -57 | -52 | -48 | -36 | 32 | 13 | 29 | 36 | 72 | 86 |
| On-budget deficit | -174 | -114 | -145 | -154 | -158 | -149 | -88 | -115 | -108 | -114 | -85 | -82 |
| Off-budget surplus | 67 | 79 | 88 | 101 | 110 | 113 | 120 | 128 | 137 | 150 | 157 | 168 |
| Debt Held by the Public | 3,733 | 3,784 | 3,859 | 3,926 | 3,988 | 4,039 | 4,021 | 4,020 | 4,003 | 3,978 | 3,916 | 3,842 |
| Memorandum: | | | | | | | | | | | | |
| Gross Domestic Product | 7,533 | 7,955 | 8,324 | 8,700 | 9,116 | 9,555 | 10,039 | 10,552 | 11,089 | 11,650 | 12,237 | 12,852 |

(Continued)

four years (including 1997), such temporary factors have caused revenue growth to exceed that of GDP. For the next few years, though, that trend is expected to reverse. By 2002, growth of revenues is projected to be close to that of GDP as the temporary factors fade. Box 3 on page 32 explains the deviations between revenue and GDP growth rates.

Outlays are estimated to be \$1,612 billion in 1997—an increase of \$52 billion from 1996. As a percentage of GDP, outlays will be 20.3 percent in 1997, the

lowest level since 1979. That percentage is projected to decline further, to 18.8 percent in 2002 and 18.4 percent in 2007, under current policies.

Spending for entitlements and other mandatory programs, by far the largest spending category, will reach \$900 billion this year and is growing faster than the economy. Fueling that growth are expenditures for Social Security, Medicare, and Medicaid, which together account for roughly three-quarters of all mandatory outlays (see Table 9 on page 33). Total mandatory spend-

Table 8.
Continued

| | Actual 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--------------------------------|----------------|------|------|------|------|------|------|------|------|------|------|------|
| As a Percentage of GDP | | | | | | | | | | | | |
| Revenues | | | | | | | | | | | | |
| Individual income | 8.7 | 9.2 | 9.1 | 8.9 | 8.7 | 8.7 | 8.8 | 8.7 | 8.8 | 8.9 | 8.9 | 9.0 |
| Corporate income | 2.3 | 2.3 | 2.3 | 2.2 | 2.1 | 2.0 | 2.0 | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 |
| Social insurance | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| Other | 1.5 | 1.5 | 1.5 | 1.6 | 1.6 | 1.5 | 1.6 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 |
| Total | 19.3 | 19.8 | 19.6 | 19.5 | 19.2 | 19.1 | 19.1 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| On-budget | 14.4 | 14.9 | 14.7 | 14.5 | 14.2 | 14.1 | 14.2 | 14.0 | 14.0 | 14.0 | 14.0 | 14.1 |
| Off-budget | 4.9 | 4.9 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Outlays | | | | | | | | | | | | |
| Discretionary | | | | | | | | | | | | |
| Defense | 3.5 | 3.4 | 3.2 | 3.2 | 3.1 | 3.0 | 3.0 | 2.9 | 2.9 | 2.9 | 2.8 | 2.7 |
| Domestic and international | 3.5 | 3.5 | 3.4 | 3.4 | 3.3 | 3.2 | 3.1 | 3.1 | 3.0 | 3.0 | 2.9 | 2.9 |
| Violent Crime Reduction | | | | | | | | | | | | |
| Trust Fund | a | a | a | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | a | a | a | a |
| Unspecified reductions | 0 | 0 | -0.1 | -0.1 | -0.3 | -0.4 | -0.6 | -0.6 | -0.6 | -0.6 | -0.5 | -0.5 |
| Subtotal | 7.1 | 6.9 | 6.7 | 6.4 | 6.2 | 5.9 | 5.6 | 5.5 | 5.4 | 5.3 | 5.2 | 5.1 |
| Mandatory spending | 11.4 | 11.3 | 11.6 | 11.7 | 11.8 | 12.0 | 11.9 | 12.1 | 12.1 | 12.4 | 12.3 | 12.5 |
| Offsetting receipts | -1.0 | -1.1 | -1.0 | -0.9 | -0.9 | -0.9 | -1.0 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 |
| Net interest | 3.2 | 3.1 | 3.0 | 2.9 | 2.7 | 2.5 | 2.3 | 2.2 | 2.1 | 1.9 | 1.8 | 1.7 |
| Total | 20.7 | 20.3 | 20.3 | 20.1 | 19.7 | 19.4 | 18.8 | 18.8 | 18.7 | 18.7 | 18.4 | 18.4 |
| On-budget | 16.7 | 16.3 | 16.4 | 16.3 | 16.0 | 15.7 | 15.0 | 15.1 | 15.0 | 15.0 | 14.7 | 14.7 |
| Off-budget | 4.0 | 3.9 | 3.9 | 3.8 | 3.8 | 3.8 | 3.8 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| Deficit (-) or Surplus | -1.4 | -0.4 | -0.7 | -0.6 | -0.5 | -0.4 | 0.3 | 0.1 | 0.3 | 0.3 | 0.6 | 0.7 |
| On-budget deficit | -2.3 | -1.4 | -1.7 | -1.8 | -1.7 | -1.6 | -0.9 | -1.1 | -1.0 | -1.0 | -0.7 | -0.6 |
| Off-budget surplus | 0.9 | 1.0 | 1.1 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 |
| Debt Held by the Public | 49.6 | 47.6 | 46.4 | 45.1 | 43.8 | 42.3 | 40.1 | 38.1 | 36.1 | 34.1 | 32.0 | 29.9 |

SOURCE: Congressional Budget Office.

a. Less than 0.05 percent.

ing is projected to grow from 11.3 percent of GDP in 1997 to 12.5 percent in 2007.

In its baseline projections, CBO assumes that policymakers will continue to abide by the discretionary spending limits set in law through 2002. Doing so will entail a competition for increasingly scarce resources, since the legislated level of spending for 2002 is not much higher than this year's level. Compared with the amount necessary to keep up with inflation, discretionary spending will have to be reduced by about \$60 bil-

lion by 2002 to comply with the statutory cap. As a percentage of GDP, discretionary spending under those policies is projected to decline from 6.9 percent this year to 5.1 percent 10 years from now.

Interest costs are a significant portion of the current federal budget—about 15 percent of all federal spending. Under CBO's assumptions of a decline in interest rates from current levels and budget surpluses after 2002, net interest drops to under 10 percent of total outlays. In dollar terms, net interest is projected to fall

from \$245 billion this year to \$219 billion in 2007. Debt held by the public, which is now close to 50 percent of GDP, declines to 30 percent by 2007 under CBO's latest projections. That debt is expected to peak at \$4 trillion in 2001 and then be whittled away by surpluses in the years to follow. Debt subject to limit, discussed in Box 4 on page 34, continues to rise during the projection period because Social Security and other trust funds continue to accrue surpluses.

Over the next 10 years, the composition of the federal budget will become more skewed toward mandatory programs at the expense of discretionary activities. As a percentage of total outlays, the share devoted to mandatory spending is expected to rise from 56 percent in 1997 to 68 percent in 2007. During that time, the portion allocated to discretionary spending will drop from 34 percent to 27 percent. After 2007, when entitlement spending is expected to rise even faster, discretionary outlays are likely to be squeezed further.

Box 3. Variability of Growth in Revenues

Over the past four years, growth in revenues has consistently outpaced that of gross domestic product (GDP) by 2 to 3 percentage points. Several factors have contributed to that outcome. The tax increases enacted in the Omnibus Budget Reconciliation Act of 1993 were the main causes in 1994 and 1995. Also, the personal and corporate income tax bases grew faster than GDP over the period, especially in 1996 and 1997. Higher-income taxpayers experienced above-average income growth, which boosted revenues because their income is taxed at higher marginal rates. Revenues in 1997 were also augmented by changes in the timing of personal income tax payments and, probably, by strong growth in capital gains, spurred by the booming stock market.

The rapid growth of revenues in 1997 nonetheless took observers by surprise. In part, personal and corporate income proved to be stronger than expected. Yet the current data on wages from the national income and product accounts (NIPAs) do not fully explain the high level of individual income tax receipts. Some of those revenues may derive from types of income, such as capital gains, that are not included in the NIPAs, and some may represent taxes on income, such as end-of-year bonuses and proprietors' income, that are difficult to capture in the early NIPA data. The latter sources of income should show up in future revisions of the NIPAs. Whatever the mix of factors, about \$46 billion of individual income tax receipts in 1997 is not explained by the present NIPA data.

Whether the unexplained component of personal income tax revenues is permanent or temporary is, for the moment, a matter of informed speculation. To the

extent that capital gains or the timing of payments plays a role, the extra receipts will not be long lasting. To the extent that some income is not yet being captured in the NIPAs, the extra receipts will be more durable. Some data from aggregate tax returns will be available this fall, but the data necessary for a complete explanation will not be issued until the summer of 1998. In the meantime, based on consultations with federal statisticians, state tax officials, and business economists, the Congressional Budget Office (CBO) has assumed that two-thirds of the unexplained amount is temporary and will gradually fade away.

CBO projects that revenue growth will slow from 8.6 percent in 1997 to a modest 3.6 percent in 1998. That slowdown stems from the fading of the temporary factors in personal income tax collections, the Taxpayer Relief Act (which delays certain payments from 1998 to 1999), a projected reduction in the rate of growth of GDP, and a sharp drop in the growth of profits that typically accompanies an easing in the pace of economic activity. If the temporary factors and the effects of the legislation were removed, revenue growth would be 6.5 percent in 1997 and 4.9 percent in 1998—rates that much more closely track the rates of growth of GDP.

Revenues are also projected to grow less rapidly than GDP in 1999 and 2000 because the aggregate tax base is not expected to grow as fast as the economy. Wages are projected to grow a bit faster than GDP as the growth in the cost of fringe benefits (which are not taxed) abates, but corporate profits will probably lag. After 2000, growth in revenues is projected to be close to that of GDP.

Table 9.
CBO Baseline Projections for Mandatory Spending, Including Deposit Insurance
(By fiscal year, in billions of dollars)

| | Actual 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|------------------------------------|----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Means-Tested Programs | | | | | | | | | | | | |
| Medicaid | 92 | 96 | 103 | 110 | 118 | 127 | 137 | 148 | 160 | 173 | 188 | 203 |
| Children's Health Insurance | a | a | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 5 |
| Food Stamps | 25 | 23 | 23 | 24 | 26 | 27 | 28 | 29 | 30 | 31 | 31 | 32 |
| Supplemental Security Income | 24 | 27 | 28 | 29 | 31 | 33 | 35 | 37 | 40 | 46 | 45 | 44 |
| Family Support | 18 | 17 | 23 | 24 | 24 | 24 | 23 | 23 | 24 | 24 | 24 | 25 |
| Veterans' Pensions | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| Child Nutrition | 8 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 12 | 12 | 13 | 13 |
| Earned Income Tax Credit | 19 | 22 | 22 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | 32 | 33 |
| Student Loans ^b | 4 | 3 | 4 | 4 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 |
| Other | <u>4</u> | <u>4</u> | <u>4</u> | <u>5</u> | <u>5</u> | <u>5</u> | <u>6</u> | <u>6</u> | <u>7</u> | <u>7</u> | <u>8</u> | <u>8</u> |
| Total | 196 | 203 | 222 | 237 | 251 | 264 | 277 | 294 | 312 | 336 | 353 | 371 |
| Non-Means-Tested Programs | | | | | | | | | | | | |
| Social Security | 347 | 362 | 379 | 397 | 417 | 438 | 461 | 485 | 511 | 537 | 566 | 597 |
| Medicare | <u>191</u> | <u>209</u> | <u>221</u> | <u>233</u> | <u>246</u> | <u>270</u> | <u>279</u> | <u>307</u> | <u>333</u> | <u>370</u> | <u>384</u> | <u>427</u> |
| Subtotal | 538 | 571 | 600 | 630 | 663 | 708 | 740 | 792 | 844 | 907 | 949 | 1,024 |
| Other Retirement and Disability | | | | | | | | | | | | |
| Federal civilian ^c | 44 | 46 | 48 | 51 | 53 | 56 | 59 | 63 | 66 | 70 | 75 | 79 |
| Military | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 38 | 39 | 40 | 41 |
| Other | <u>5</u> | <u>4</u> | <u>4</u> | <u>4</u> | <u>5</u> | <u>5</u> | <u>5</u> | <u>5</u> | <u>5</u> | <u>5</u> | <u>5</u> | <u>5</u> |
| Subtotal | 77 | 80 | 83 | 87 | 91 | 95 | 99 | 104 | 109 | 114 | 120 | 125 |
| Unemployment Compensation | 23 | 21 | 22 | 25 | 27 | 29 | 30 | 32 | 33 | 34 | 36 | 37 |
| Deposit Insurance | -8 | -14 | -5 | -4 | -3 | -2 | -2 | -2 | -1 | -1 | -1 | -1 |
| Other Programs | | | | | | | | | | | | |
| Veterans' benefits ^d | 17 | 19 | 20 | 20 | 21 | 21 | 22 | 22 | 23 | 25 | 24 | 23 |
| Farm price supports | 5 | 6 | 7 | 7 | 7 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Social services | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Credit reform liquidating accounts | -9 | -8 | -6 | -6 | -6 | -6 | -5 | -6 | -6 | -6 | -6 | -6 |
| Other | <u>14</u> | <u>18</u> | <u>19</u> | <u>16</u> | <u>19</u> | <u>22</u> | <u>24</u> | <u>24</u> | <u>23</u> | <u>23</u> | <u>24</u> | <u>25</u> |
| Subtotal | 32 | 40 | 45 | 43 | 46 | 49 | 51 | 52 | 51 | 53 | 53 | 52 |
| Total | 662 | 699 | 746 | 781 | 824 | 878 | 918 | 978 | 1,035 | 1,108 | 1,157 | 1,238 |
| Total | | | | | | | | | | | | |
| All Mandatory Spending | 858 | 902 | 968 | 1,019 | 1,075 | 1,142 | 1,195 | 1,272 | 1,347 | 1,444 | 1,509 | 1,609 |

SOURCE: Congressional Budget Office.

NOTE: Spending for benefit programs shown above generally excludes administrative costs, which are discretionary. Spending for Medicare also excludes premiums, which are considered offsetting receipts.

a. Children's Health Insurance is a new program that was created as part of the Balanced Budget Act of 1997 and will take effect in 1998.

b. Formerly known as guaranteed student loans.

c. Includes Civil Service, Foreign Service, Coast Guard, and other retirement programs and annuitants' health benefits.

d. Includes veterans' compensation, readjustment benefits, life insurance, and housing programs.

Box 4. Debt Subject to Limit

As part of the Balanced Budget Act of 1997, the Congress increased the statutory limit on federal debt from \$5.5 trillion to \$5.95 trillion. That amount should be sufficient until the summer of 2000. Even in the face of small deficits and budget surpluses, though, the debt subject to limit will continue to increase, thereby implying that the ceiling will have to be raised in the future.

Debt subject to limit far exceeds debt held by the public (a much more useful measure of what the government owes), mainly because it includes the holdings of the Social Security, Medicare, and other government trust funds. The Congressional Budget Office's projections of debt subject to limit through 2007 are presented below. Because the size of the trust fund surplus dwarfs the projected total budget surpluses after 2002, debt subject to limit continues to rise throughout the projection period.

Baseline Projections of Debt Subject to Statutory Limit (By fiscal year, in billions of dollars)

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Debt Subject to Limit, Start of Year | 5,137 | 5,314 | 5,525 | 5,751 | 5,979 | 6,179 | 6,339 | 6,513 | 6,674 | 6,834 | 6,996 |
| Changes | | | | | | | | | | | |
| Deficit | 34 | 57 | 52 | 48 | 36 | -32 | -13 | -29 | -36 | -72 | -86 |
| Trust fund surplus | 112 | 130 | 153 | 159 | 143 | 171 | 168 | 172 | 179 | 218 | 178 |
| Other changes ^a | <u>31</u> | <u>24</u> | <u>21</u> | <u>21</u> | <u>20</u> | <u>22</u> | <u>19</u> | <u>18</u> | <u>17</u> | <u>15</u> | <u>17</u> |
| Total | 177 | 210 | 226 | 228 | 199 | 161 | 174 | 161 | 160 | 162 | 110 |
| Debt Subject to Limit, End of Year | 5,314 | 5,525 | 5,751 | 5,979 | 6,179 | 6,339 | 6,513 | 6,674 | 6,834 | 6,996 | 7,106 |

SOURCE: Congressional Budget Office.

a. Primarily changes in Treasury cash balances, investments by government funds (such as the Bank Insurance Fund) that are not trust funds, and activity of the credit financing accounts.

Changes Resulting from the Reconciliation Legislation

The Congress enacted two reconciliation bills in August—the Balanced Budget Act of 1997 and the Taxpayer Relief Act of 1997. CBO estimates that those acts will reduce the deficit by a cumulative \$118 billion from 1997 through 2002 compared with its March

1997 baseline estimates. Outlay savings of \$198 billion will be partly offset by \$80 billion of revenue decreases over that period. Through the following five years—2003 through 2007—the legislation will lead to additional net budget savings of about \$475 billion, assuming that discretionary spending grows at the rate of inflation after 2002. The President's use of his newly granted line-item veto powers will have very little effect on those cumulative savings even if the vetoes are upheld. See Box 5 for a description of the provisions excised by the President.

Revenues

The Joint Committee on Taxation estimates that the tax provisions in the two reconciliation acts will reduce revenues below the levels projected under prior law by about \$80 billion through 2002 and \$242 billion through 2007 (see Table 10). In any given year, those changes represent a net decrease of slightly more than 1 percent of revenues (less than 0.3 percent of GDP). In addition, changes to the tax code will increase refundable tax credits, which are recorded as outlays, by nearly \$30 billion over 10 years. Total revenue reductions through 2002 amount to \$141 billion, over half of which result from a new child tax credit. Offsetting those reductions are more than \$60 billion in revenue increases, around 55 percent of which come from ex-

tending and modifying airline excise taxes. The reconciliation acts also contain several provisions that merely shift the payment of taxes from one fiscal year to another—increasing revenues in 1999 and 2002 and lowering revenues in other years, especially 1998.

The revenue loss from the reconciliation legislation is twice as big in the second five years as in the first five years for two reasons: first, a number of provisions will be phased in slowly; second, some of the revenue-losing provisions have transitional features that produce short-term revenue gains. By 2007, however, all of the provisions will be completely phased in. The revenue reductions from the reconciliation acts will continue beyond 2007, but the revenue loss will grow more slowly than GDP. The revenue losses from two

Box 5.

Exercise of Line-Item Veto Authority

On August 11, the President for the first time exercised new authority granted last year by the Line Item Veto Act. As allowed by that act, he canceled one "item of direct spending" (a provision that would increase direct, or mandatory, spending) in the Balanced Budget Act of 1997 and two provisions providing a "limited tax benefit" (a revenue-losing provision affecting 100 or fewer beneficiaries or a provision providing transitional relief for 10 or fewer beneficiaries) in the Taxpayer Relief Act of 1997. Those provisions would:

- o Waive the application to the state of New York of certain tax provisions for Medicaid providers and deem certain taxes currently under review to be in compliance with restrictions on providers' taxes. That waiver would prevent the federal government from attempting to recover about \$1.5 billion in disputed Medicaid payments to New York. Because the recovery of the disputed payments is uncertain even if the waiver is not in effect, the Congressional Budget Office (CBO) estimates that the cost of the waiver is the \$150 million expected value of the recovery effort, all recorded in 1998.
- o Defer gains from sales of stock in firms that process or refine farm products to farm cooperatives that supply the firm with raw farm products, thereby reducing revenues by a total of \$84 million over the 1998-2002 period.

- o Allow multinational financial services firms to defer taxes on their foreign earnings during 1998, reducing revenues by a total of \$94 million in 1998 through 2000.

Under the Line Item Veto Act, the Congress has 30 "calendar days of session" (those days when both the House and Senate are in session) to pass a bill that would disapprove any or all of the cancellations specified by the President. If the President vetoes that bill, it can be enacted only by a vote of two-thirds of the Members in the House and in the Senate to override the veto. In addition, the President's cancellations face an almost certain challenge in court on the grounds that the Line Item Veto Act is unconstitutional.

The estimates of the Balanced Budget Act and the Taxpayer Relief Act discussed in this report, and CBO's baseline projections of spending and revenues, do not reflect the effects of the proposed cancellations. Under the Line Item Veto Act, cancellations of provisions in direct spending and revenue bills do not reduce the pay-as-you-go estimates of those bills that are required by the Balanced Budget and Emergency Deficit Control Act of 1985; the cancellations therefore will not make room for additional spending or further tax cuts. In any case, the Balanced Budget Act provides that none of its deficit effects or those of the Taxpayer Relief Act shall be included on the pay-as-you-go scorecard.

of the major provisions—the child tax credit and relief from the alternative minimum tax (AMT)—will continue to diminish, more than offsetting the continued growth of revenue losses from provisions affecting individual retirement accounts (IRAs) and estate taxes.

Child Tax Credit. The child credit results in the largest tax reduction, decreasing revenues by \$73 billion through 2002 and \$155 billion over 10 years. It will also increase outlays for the earned income tax credit (EITC), since some beneficiaries will be eligible to

Table 10.
Changes in Revenues Resulting from Enactment of Reconciliation Legislation
(By fiscal year, in billions of dollars)

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | Total, 1997- 2002 | Total, 1997- 2007 |
|---|----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------------------|-------------------------|
| Provisions That Reduce Revenues | | | | | | | | | | | | | |
| Child Tax Credit | 0 | -3 | -16 | -19 | -18 | -18 | -18 | -17 | -16 | -16 | -15 | -73 | -155 |
| Education Incentives | 0 | -3 | -8 | -9 | -10 | -10 | -11 | -11 | -12 | -12 | -13 | -39 | -99 |
| Estate and Gift Tax Reductions | 0 | a | -1 | -1 | -2 | -2 | -3 | -3 | -6 | -7 | -9 | -6 | -34 |
| Capital Gains Rate Reductions | 1 | 6 | a | -3 | -3 | -2 | -4 | -4 | -4 | -4 | -5 | a | -21 |
| IRA Expansions | 0 | a | a | a | a | -1 | -2 | -3 | -4 | -4 | -5 | -2 | -20 |
| Corporate AMT Reductions | a | a | -1 | -2 | -2 | -3 | -3 | -3 | -2 | -2 | -2 | -8 | -20 |
| Extension of Research Credit to 6/30/98 | a | -1 | -1 | a | a | a | 0 | 0 | 0 | 0 | 0 | -2 | -2 |
| Amtrak Financing | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 |
| All Other | <u>a</u> | <u>-1</u> | <u>-1</u> | <u>-2</u> | <u>1</u> | <u>-5</u> | <u>-2</u> | <u>-3</u> | <u>-2</u> | <u>-2</u> | <u>-2</u> | <u>-8</u> | <u>-19</u> |
| Total Reductions | 1 | -3 | -29 | -36 | -35 | -40 | -42 | -44 | -47 | -48 | -51 | -141 | -373 |
| Provisions That Increase Revenues | | | | | | | | | | | | | |
| Airport and Airway Taxes | 0 | 6 | 6 | 6 | 7 | 8 | 8 | 9 | 9 | 10 | 11 | 33 | 80 |
| Increase in Cigarette Tax | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 17 |
| Other Excise Taxes | a | a | a | a | a | a | a | a | a | a | a | 1 | 3 |
| Extension of FUTA Surtax | 0 | 0 | 1 | 2 | 2 | 2 | 1 | a | a | a | a | 6 | 7 |
| All Other | <u>a</u> | <u>2</u> | <u>3</u> | <u>3</u> | <u>3</u> | <u>3</u> | <u>2</u> | <u>2</u> | <u>2</u> | <u>2</u> | <u>3</u> | <u>14</u> | <u>26</u> |
| Total Increases | 0 | 8 | 10 | 13 | 14 | 15 | 14 | 13 | 14 | 15 | 16 | 60 | 131 |
| Provisions That Change Payment Dates | | | | | | | | | | | | | |
| Total Timing Changes | -1 | -14 | 12 | 0 | -3 | 7 | -1 | 0 | 0 | 0 | 0 | 1 | 0 |
| All Provisions | | | | | | | | | | | | | |
| Total Revenue Changes | a | -9 | -7 | -23 | -24 | -18 | -29 | -31 | -33 | -34 | -35 | -80 | -242 |

SOURCES: Congressional Budget Office; Joint Committee on Taxation.

NOTES: This table reflects changes in revenues resulting from enactment of the two reconciliation bills: the Balanced Budget Act of 1997 and the Taxpayer Relief Act of 1997.

IRA = individual retirement account; AMT = alternative minimum tax; FUTA = Federal Unemployment Tax Act.

a. Less than \$500 million.

claim the child credit. The credit is \$400 for 1998 and \$500 as of 1999 for each child under the age of 17. It is phased out beginning at \$110,000 of adjusted gross income (AGI) for couples filing joint returns and \$75,000 for individuals. The length of the phaseout is variable, depending on the number of eligible children.

The total cost of the credit declines over time because neither the amount of the credit nor the phaseout is indexed for inflation. Over time, a greater share of families will receive lower credits as they move into the phaseout range or become ineligible. In addition, the credit is not applied against the alternative minimum tax. The AMT will affect a greater number of taxpayers over time, so fewer will benefit from the credit.

Education Incentives. Tax incentives for education will reduce revenues by nearly \$100 billion through 2007, with over 75 percent of the reduction stemming from the new HOPE and Lifetime Learning tax credits. The HOPE credit equals 100 percent of the first \$1,000 and 50 percent of the next \$1,000 of tuition and fees paid for the first two years of postsecondary education. Subsequent postsecondary studies qualify for the Lifetime Learning credit, which equals 20 percent of up to \$5,000 of education costs (\$10,000 after 2002). Both credits are nonrefundable and phase out for joint filers with income between \$80,000 and \$100,000 and for other taxpayers with income between \$40,000 and \$50,000, indexed for inflation after 2001. Taxpayers may claim one HOPE credit for each qualifying student, but the cap on the Lifetime Learning credit applies to the total expenses for all eligible students in the family. Only students enrolled at least half-time in a degree program qualify for the HOPE credit. In contrast, the Lifetime Learning credit may be claimed for students in degree programs or taking courses to acquire or improve job skills. In a given year, a taxpayer may claim the HOPE credit for some students and the Lifetime Learning credit for others, but both credits may not be claimed for the same student in one year.

The Taxpayer Relief Act also establishes new individual retirement accounts for education, reducing revenues by \$14 billion over the next decade. Taxpayers may contribute up to \$500 annually for each beneficiary, and subsequent withdrawals to pay educational costs are not taxable. The maximum contribution phases down to zero for joint filers with income be-

tween \$150,000 and \$160,000 and other taxpayers with income between \$95,000 and \$110,000.

Other incentives allow penalty-free withdrawals from IRAs for education expenses, expand the tax advantages of state-sponsored prepaid tuition programs, permit some interest on student loans to be deducted, and reinstate the exclusion of employer-provided assistance for undergraduate education.

Estate and Gift Tax Provisions. The reconciliation legislation raises the unified credit against the estate and gift tax and then indexes the exemption for inflation. Those changes reduce revenues by just \$6 billion through 2002 but by \$34 billion over the 10-year period. The current credit, which has not changed since 1987, is equivalent to an exclusion of the first \$600,000 of transfers. The legislation raises the credit in steps to an exclusion of \$1 million in 2006. After that, the credit amount (and hence the effective exclusion), the annual limits on gifts, and the limit on current-use valuation for family businesses will all be adjusted for inflation. Since the largest increases in the unified credit occur in 2004 and 2005, the revenue loss from the change grows rapidly in the last three years of the projection period.

Reductions in the Capital Gains Tax Rate. Prior law imposed a ceiling of 28 percent on the rate at which capital gains income was taxed for people whose rate on other income was 31 percent, 36 percent, or 39.6 percent. The ceiling applied to gains on assets held for one year or more.

The new law provides lower tax rates for capital gains realized after May 6, 1997. The new rates are 10 percent for people otherwise in the 15 percent tax bracket and 20 percent for those in higher brackets. As of July 28, 1997, those rates apply to gains on assets held for more than 18 months. Prior law applies to gains on assets held for shorter periods. Thus, gains on assets held between 12 and 18 months will continue to have a maximum tax rate of 28 percent, and gains from assets held less than 12 months will continue to be taxed at the same rates as other income. Lower rates of 8 percent and 18 percent will eventually apply to assets held for more than five years. The 8 percent rate will apply to long-held assets sold in 2001 or later by taxpayers in the lowest income bracket. The top rate will

drop to 18 percent for assets purchased after 2001 and held for at least five years. In 2001, taxpayers have the option of paying tax on their accumulated gains on an asset to take advantage of the lower rates on subsequent gains if the assets are held for an additional five years.

The legislation also allows homeowners filing jointly to exclude \$500,000 (\$250,000 for other taxpayers) of capital gains on each home sale, provided they have lived in their home for at least two of the past five years and have not claimed the exclusion for a sale in the past two years. Taxpayers will no longer be able to roll over gains from one home to the next.

After an initial burst of realizations over the next two years, the lower rates are estimated to reduce revenues in each year. The revenue loss is lower in 2002 because taxpayers who realize gains in 2001 in order to acquire assets eligible for lower future rates will pay higher taxes in April 2002. The total revenue loss through 2007 is estimated to be \$21 billion.

IRA Expansions. The Taxpayer Relief Act makes two significant changes to the tax treatment of individual retirement accounts. The current deductible IRAs will be made available to taxpayers with higher income, and a new type of account, known as a Roth IRA, will be introduced.

Currently, couples in which either spouse is eligible for employer-sponsored pension coverage can deduct the full amount of an IRA contribution from their taxable income only if their AGI is below \$40,000, and none of the IRA is deductible if their income exceeds \$50,000. The deductible amount of the IRA for individuals covered by a pension is phased out between \$25,000 and \$35,000. Those income levels will gradually rise until they reach \$80,000 and \$100,000 for couples and \$50,000 and \$60,000 for individuals.

Contributions to Roth IRAs will not be deductible, but the investment earnings in those accounts will be completely tax-free when withdrawn at the qualifying age or for qualifying purposes, which include a first-time home purchase. The income phaseouts for Roth IRAs begin at \$150,000 for joint filers and \$95,000 for single filers. The combined annual contribution to both types of IRAs is limited to \$2,000 per person.

The effect of the IRA provisions grows over time for three main reasons. First, the increased income limits for deductible IRAs are phased in. Second, to the extent that Roth IRAs replace assets that would have been taxed, the revenue loss from those accounts increases as the balances grow (although there is no initial revenue loss since contributions are not deductible). Third, in the first few years, revenues receive a temporary boost because the law allows the penalty-free shifting of assets from deductible IRAs to Roth IRAs. Taxpayers who shift to Roth IRAs to make their future earnings tax-exempt will have to pay income taxes, but not penalties for early withdrawal, on the amount shifted. By 2007, the annual revenue loss from the IRA provisions is projected to reach \$5 billion.

Tax Reductions for Corporations and Small Businesses. Among other relief for businesses, the legislation provides substantial relief to corporations from the alternative minimum tax. First, for investment assets put in place after December 31, 1998, corporations will be able to calculate depreciation for purposes of the AMT using the same asset lifetimes they use for regular tax purposes, although firms will still be required to use a less accelerated method of calculating depreciation for AMT purposes. The previous requirement to use longer lifetimes for the AMT accounted for the bulk of AMT revenue. Second, corporations with business receipts averaging less than \$5 million annually over a recent period will be exempt from the AMT. In addition, the legislation allows farmers to use the installment method of accounting for AMT purposes. The annual revenue losses estimated for the three provisions decline after 2004 because AMT payments largely represent an earlier payment of regular taxes that would eventually be paid anyway. The estimated loss in revenue through 2007 is about \$20 billion.

The legislation also clarifies the definition of a principal place of business (allowing a greater number of self-employed people to deduct certain business-related housing expenses from their business income), increases the percentage of health insurance expenses that self-employed people are permitted to deduct, and extends the research and experimentation credit for 13 months.

Increases in Excise Taxes. Much of the revenue raised by the reconciliation acts comes from extending existing excise taxes or increasing their rates. Almost

\$33 billion results through 2002 from extending and modifying the excise taxes related to the Airport and Airway Trust Fund, which were previously scheduled to expire on September 30, 1997. The 10 percent tax on air passenger tickets has been extended but substantially modified. In 2002, when all the changes will have been phased in, the rate will be 7.5 percent of the purchase price of the ticket, with an additional tax of \$3 for each segment of a domestic flight. The international departure fee has been increased from \$6 to \$12 and now applies to both departures and arrivals. A new 7.5 percent tax will be imposed on cash payments by credit card companies to airlines for the right to award airline tickets to their customers. The other Airport and Airway Trust Fund taxes have been extended without modification. The 4.3 cents per gallon tax on aviation fuel, now dedicated to the general fund, will be deposited in the trust fund. The \$33 billion in revenue generated by the provisions through 2002 is approximately \$4 billion greater than the amount an extension of prior law would have produced.

The current excise tax rate on cigarettes is 24 cents per pack of 20. Under the new law, the rate will rise by 10 cents per pack on January 1, 2000. An additional increase of 5 cents per pack on January 1, 2002, will bring the total increase to 15 cents per pack. The rates on other tobacco products, such as pipe tobacco and cigars, will increase by the same amounts. Those changes will generate additional revenues of \$17 billion through 2007.

Increase in Federal Unemployment Tax. The Federal Unemployment Tax Act (FUTA) effectively imposes a 0.8 percent tax on the first \$7,000 of wages paid to each covered employee. Those revenues are deposited into accounts designated for administrative costs, the federal portion of extended unemployment benefits, and loans to states. Federal law limits the size of those funds; excess funds are distributed to state accounts.

The 0.8 percent tax includes a temporary 0.2 percent surtax that was set to expire at the end of 1998. The legislation extends that surtax through 2007 and adjusts the cap on one of the federal accounts so that the additional revenues can be retained. No increase in revenues is projected for later years, since the limit on the federal accounts will still be reached in 2003.

Increased Taxes on Businesses. The new law also targets certain businesses for tax increases. Among other provisions, it expands the limitations on the deductibility of premiums and interest for corporate-owned life insurance policies. It also restricts the use of certain tax-motivated methods for selling corporate assets—for example, by requiring that certain dividends and distributions of controlled corporate stock be treated as capital gains. The new law also limits the use of losses by allowing businesses to carry losses back (and thereby receive refunds of previous taxes paid) generally for only two years rather than the three years allowed under prior law, but businesses can now carry losses forward for 20 years rather than 15. The two changes in the use of losses raise revenue on net, but in the long term, the gain represents predominantly the timing of tax payments, not their level.

Timing Changes. The reconciliation legislation includes four provisions that change payment dates from one fiscal year to another but do not change tax liabilities. In three cases, payments are delayed from the end of one fiscal year into the beginning of the next. Remittals of airline ticket taxes will be moved from the end of fiscal year 1997 into 1998 and will be delayed again one year later. Excise taxes on fuels will be postponed from the end of fiscal year 1998 into 1999. The Universal Service Fund will receive payments at the beginning of fiscal year 2002 instead of at the end of 2001. The rule that determines how much individuals must pay in withholding and estimated taxes during the tax year will first be liberalized and then made tighter than under prior law. Those changes reduce revenue in 1998 and 2003 and increase it in 1999 and 2002.

Discretionary Spending

New limits on discretionary spending through 2002 included in the Balanced Budget Act of 1997 will reduce estimated discretionary spending by \$89 billion relative to CBO's March baseline. There are now three separate caps—for defense spending, the Violent Crime Reduction Trust Fund (VCRTF), and other nondefense, noncrime spending—for 1998 and 1999. In 2000, the number of caps narrows to two (VCRTF and other); in 2001 and 2002, a single cap covers all discretionary spending. After the cap expires in 2002, the baseline assumes that discretionary spending grows at the rate of inflation.

Table 11.
Changes in Outlays Resulting from Enactment of Reconciliation Legislation
(By fiscal year, in billions of dollars)

| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | Total, 1998- 2002 | Total, 1998- 2007 |
|-------------------------------------|------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| Discretionary Spending ^a | 10.8 | -1.1 | -13.8 | -31.4 | -53.3 | -54.9 | -56.5 | -58.3 | -60.1 | -61.9 | -88.8 | -380.5 |
| Mandatory Spending | | | | | | | | | | | | |
| Medicare | | | | | | | | | | | | |
| Benefit payments | -6.3 | -14.7 | -26.7 | -16.1 | -34.8 | -32.3 | -35.1 | -40.0 | -54.1 | -36.6 | -98.6 | -296.7 |
| Premiums | <u>0.2</u> | <u>-0.9</u> | <u>-2.4</u> | <u>-4.1</u> | <u>-6.2</u> | <u>-8.8</u> | <u>-11.8</u> | <u>-15.0</u> | <u>-18.1</u> | <u>-21.2</u> | <u>-13.4</u> | <u>-88.2</u> |
| Subtotal | -6.1 | -15.7 | -29.1 | -20.2 | -41.0 | -41.1 | -46.9 | -54.9 | -72.2 | -57.8 | -112.0 | -385.0 |
| Medicaid ^b | 0.6 | -0.2 | -1.4 | -2.6 | -3.6 | -4.5 | -5.1 | -5.8 | -6.7 | -7.6 | -7.2 | -36.9 |
| Federal Communications | | | | | | | | | | | | |
| Commission's auctions | | | | | | | | | | | | |
| of electromagnetic | | | | | | | | | | | | |
| spectrum | 0 | -2.0 | -3.3 | -4.3 | -11.8 | -0.5 | -1.0 | -0.9 | -0.8 | -0.7 | -21.4 | -25.3 |
| Veterans' programs | -0.2 | -0.8 | -0.9 | -0.9 | -1.0 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -3.9 | -4.7 |
| Increased agency | | | | | | | | | | | | |
| contributions to federal | | | | | | | | | | | | |
| employee retirement | -0.6 | -0.6 | -0.6 | -0.6 | -0.5 | c | 0 | 0 | 0 | 0 | -2.9 | -2.9 |
| Housing programs | -0.1 | -0.2 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 | -1.8 | -4.2 |
| Student loan program | -0.2 | -0.2 | -0.2 | -0.1 | -1.1 | c | c | c | -0.1 | -0.1 | -1.8 | -2.0 |
| Children's Health Insurance | 4.3 | 4.3 | 4.3 | 4.3 | 3.2 | 3.2 | 3.2 | 4.1 | 4.1 | 5.0 | 20.3 | 39.7 |
| Supplemental Security | | | | | | | | | | | | |
| Income | 2.3 | 2.1 | 2.0 | 1.5 | 1.6 | 1.5 | 1.3 | 1.3 | 1.0 | 0.8 | 9.5 | 15.3 |
| Food Stamp program | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 1.5 | 2.8 |
| Welfare-to-work grants | 0.4 | 1.1 | 0.8 | 0.4 | 0 | 0 | 0 | 0 | 0 | 0 | 2.7 | 2.7 |
| Earned income credit | | | | | | | | | | | | |
| and child credit ^d | 0 | 2.4 | 3.0 | 3.1 | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 11.6 | 28.6 |
| District of Columbia | | | | | | | | | | | | |
| employee retirement | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.7 | 0 | 1.0 |
| Other | <u>c</u> | <u>-0.1</u> | <u>-4.6</u> | <u>4.0</u> | <u>-0.9</u> | <u>-0.1</u> | <u>-0.1</u> | <u>-0.1</u> | <u>-0.1</u> | <u>-0.1</u> | <u>-1.6</u> | <u>-1.9</u> |
| Total | 0.5 | -9.6 | -30.0 | -15.6 | -52.2 | -38.7 | -45.7 | -53.4 | -71.3 | -56.7 | -106.9 | -372.8 |
| Debt Service ^e | 0.4 | 0.9 | 0.6 | -0.6 | -3.6 | -7.4 | -11.1 | -15.4 | -20.5 | -25.9 | -2.4 | -82.7 |
| Total Spending Changes | 11.7 | -9.9 | -43.2 | -47.6 | -109.2 | -101.1 | -113.4 | -127.1 | -151.9 | -144.5 | -198.1 | -836.0 |

SOURCE: Congressional Budget Office.

NOTE: This table reflects changes in outlays resulting from enactment of the two reconciliation bills: the Balanced Budget Act of 1997 and the Taxpayer Relief Act of 1997.

a. These savings represent the changes in CBO's baseline projections of discretionary spending resulting from the new statutory limits on discretionary spending specified in the Balanced Budget Act. Those projections assume that future appropriations will equal the statutory limits (which were scheduled to expire after 1998 but were extended through 2002 by the Balanced Budget Act) and grow at the rate of inflation after the limits expire.

b. These savings include the effects on Medicaid spending of reconciliation provisions dealing with welfare and veterans' programs (included in titles V and VII of the Balanced Budget Act), as well as the effects of direct changes in the laws governing Medicaid (included in title IV).

c. Less than \$50 million.

d. Estimated by the Joint Committee on Taxation.

e. Includes the effect on debt service of changes in revenues resulting from the reconciliation legislation.

Complying with the caps in 1998 does not appear to be a major problem. Appropriation bills already passed by the House and Senate (no bills have yet been agreed to by both Houses) are consistent with the allowed amounts, which are just a few billion dollars below the level of appropriations enacted for 1997 adjusted for inflation. The revised cap for 1998 is also \$11 billion higher than the cap in place at the start of 1997 (see Table 11). By 2002, however, discretionary spending under the new single cap is projected to be \$53 billion lower than under CBO's previous baseline and would be only \$11 billion higher than in 1997. In real terms, such spending would be 12 percent lower than this year's outlay level, and the difficult decisions about how to accomplish such a reduction are yet to be made.

Between 1992 and 1996, similarly restrictive caps were met through reductions in defense spending. At this point, though, the peace dividend resulting from the end of the Cold War has probably been used up, and it is not clear that policymakers will agree to cut defense spending as they did in the mid-1990s. If anything, unforeseen conflicts elsewhere in the world and replacement of aging equipment could push defense spending in the opposite direction.

Mandatory Spending

Changes in mandatory spending in the reconciliation bills provide a net reduction in the deficit of \$52 billion in 2002 and \$107 billion for the five-year period (see Table 11). Increases in spending for some welfare programs and funding for a new block grant to states to provide health care for uninsured children partially offset reductions in outlays for other programs, particularly Medicare and Medicaid. Increased receipts from auctioning the right to use portions of the electromagnetic spectrum also help reduce the deficit, especially in 2002.

Medicare Savings. Medicare accounts for the overwhelming majority of cuts in mandatory spending included in the reconciliation package. CBO estimates that between 1998 and 2002, benefit payments will be reduced by nearly \$99 billion. Increased premiums from beneficiaries will save another \$13 billion. Those modifications will slow projected annual growth in the program from 8.5 percent to about 6 percent through

2002. Over the 10-year period, changes to the Medicare program are expected to save \$385 billion.

Most of the savings in Medicare benefits stem from reductions in payments to providers in Medicare's fee-for-service sector. The act cuts the growth of payment rates for almost every category of services, including inpatient and outpatient hospital services, physicians' services, skilled nursing facilities, therapy services, home health services, laboratory services, and durable medical equipment. Slowing the growth of fee-for-service spending also slows the growth of rates paid to capitated plans, whose payment rates are linked to those in the fee-for-service sector. (Capitation refers to a health insurance payment mechanism in which a fixed amount is paid per person to cover services.)

The Balanced Budget Act also alters Medicare in ways intended to encourage more plans and more enrollment in its capitated sector, called Medicare+Choice. Although the Medicare+Choice provisions produce little immediate budgetary savings, they help build an infrastructure for Medicare capitation and set the stage for further changes to deal with Medicare's long-term financial problems. As the next step toward solving those problems, the act establishes a National Bipartisan Commission on the Future of Medicare, which will issue its recommendations to the Congress and the President in March 1999.

Medicare+Choice will make available to beneficiaries a broader range of plans beyond the currently available health maintenance organizations (HMOs). For the first time, beneficiaries will be given uniform, comprehensive, and timely comparative information about the options available to them. Greater choice of health plans and increases in payment rates will help expand Medicare's capitated sector in rural areas. Other provisions of the act, however, will tend to reduce enrollment in capitated plans. In particular, Medicare's payment rates will grow more slowly than costs in the fee-for-service sector for several years, potentially eroding the additional benefits that many of the capitated plans now provide.

In addition to slowing the growth of benefits and increasing premiums, the Balanced Budget Act also undertakes some new initiatives in Medicare. Expanded coverage of clinical preventive services will increase Medicare spending by \$4.0 billion over the

1998-2002 period. Increased payments to rural hospitals and coverage of telephone consultations in certain rural areas will cost \$0.4 billion. And states will receive \$1.5 billion to help pay Medicare premiums for Medicaid beneficiaries who do not now qualify for such assistance.

The new law also reassigns the costs of certain home health services from the Hospital Insurance Trust Fund to the Supplementary Medical Insurance Trust Fund. That change has no effect on the bottom line of the budget, but it helps postpone the depletion of the Hospital Insurance Trust Fund from 2001 to 2007.

Other Net Savings in Mandatory Spending. Estimated Medicaid savings from the Balanced Budget Act total \$7 billion over the next five years and \$37 billion over the next 10 years. The largest savings come from instituting limits on state allotments for payments to hospitals that serve a disproportionate share of patients in poverty. Additional savings from giving states flexibility in paying providers are offset by higher spending for other purposes.

The Federal Communications Commission (FCC) has been instructed to conduct more auctions of the right to use portions of the electromagnetic spectrum for commercial purposes. Those additional auctions are expected to raise \$21 billion over the 1998-2002 period, with slightly more than half of that amount to be recorded in 2002. Estimates of auction receipts are very uncertain because market conditions may change rapidly and because the FCC has considerable discretion in how it conducts future auctions and licensing. CBO assumes that future spectrum auctions will yield, on average, lower prices than those achieved in recent auctions, because of two factors: the increased supply of licenses that will result, and the development of new technologies that increase the information-carrying capacity of the spectrum.

Veterans' programs are scheduled to be reduced by nearly \$4 billion from 1998 through 2002. Most of the savings come from extending expiring provisions regarding payments for Medicaid-eligible veterans in nursing homes, recovering the costs of medical care, and housing. Some of those savings are offset by higher Medicaid payments.

Among other provisions of the reconciliation laws, additional agency contributions for federal employee retirement programs will raise over \$0.5 billion a year through 2002. Federal employees will also contribute more for their retirement, thereby increasing revenues by nearly \$2 billion over the 1998-2002 period. Changes to federal housing and student loan programs each save roughly \$2 billion over the five-year period.

Increases in Mandatory Spending. The Balanced Budget Act creates a new capped entitlement to provide health care coverage for children. States will be given approximately \$20 billion over the next five years to expand coverage for uninsured low-income children. States may use their grant to purchase health coverage from group plans or to expand their Medicaid programs. They may also arrange for health care services directly through providers or through other means approved by the Secretary of Health and Human Services.

CBO estimates that the new State Children's Health Insurance Program, together with changes in Medicaid, will extend health care coverage to 2 million children who would otherwise have been uninsured. Not all of the new federal funds and required state matching funds will yield greater coverage, however. States will use some of the funds to offset reductions in Medicaid payments for disproportionate share hospitals, to provide services directly, or to replace spending on other state health programs and administrative activities. In addition, the new program will cover 1.4 million children who would have had health insurance coverage anyway.

Changes to Supplemental Security Income (SSI), the Food Stamp program, and Temporary Assistance to Needy Families (TANF) were included to ameliorate some of the effects of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (also known as welfare reform). That law denied SSI benefits to legal immigrants. The reconciliation act restores eligibility to legal immigrants who were in the United States when the welfare reform law was passed. That provision is estimated to cost about \$2 billion a year through 2002. Increased spending on the Food Stamp program and welfare-to-work grants provided under the TANF block grant to states will cost another \$4 billion through 2002.

Increased outlays for the earned income tax credit primarily reflect the child tax credit enacted as part of the Taxpayer Relief Act of 1997. The child credit will reduce the tax liabilities of families receiving the EITC and increase the portion of the EITC that is refundable. About one-third of the spending is the result of making the child credit refundable for families with three or more children. The combined effect will raise outlays by an estimated \$2.4 billion in 1999 and \$3.6 billion in 2007.

Unfunded Liabilities of the District of Columbia's Pension Plan. Under the Balanced Budget Act, the federal government will assume responsibility for the existing pension plans that the District of Columbia provides to its law enforcement officers, firefighters, teachers, and judges. The District will close out those plans and transfer to the federal government approximately \$3.2 billion in assets and \$9 billion in liabilities. Although the federal government will assume unfunded liabilities of approximately \$5.8 billion, this change will initially have no net effect on the deficit. The cash received by the federal government from investing and selling the transferred assets will offset the outlays for payments to beneficiaries until such payments exhaust the assets in or near fiscal year 2006. At that time, the federal government will begin to pay the remaining pension benefits out of general revenues—about \$0.3 billion in 2006 and \$0.7 billion in 2007. Payments will continue until the middle of the next century, increasing to roughly as much as \$1 billion a year before gradually dropping off.

Timing Shifts. If the first day of a month falls on a weekend or federal holiday, payments for veterans' benefits, SSI, and Medicare HMOs are normally pushed back into the preceding month. When that happens to payments due on October 1—the beginning of the federal government's fiscal year—billions of dollars can be shifted to the preceding year. The Balanced Budget Act of 1997, however, reverses the shift from 2001 to 2000 that would have occurred in those programs. The act also shifts into 2001 nearly \$5 billion in HMO payments that would otherwise have been made in 2002.

Other Changes in the Budget Outlook Since March

CBO last presented its baseline budget projections in March 1997 in conjunction with its analysis of President Clinton's budgetary proposals. The budget estimates have changed since then, partly because of the reconciliation laws but also because of revisions in CBO's economic forecast and technical assumptions about revenues and spending (see Table 12).

Policy Changes

CBO categorizes the reestimates that result from legislation enacted since the previous baseline as policy changes. Most of those changes stem from the reconciliation package and were discussed in the previous section. The only other change of budgetary note that affects outlays is supplemental funding for disaster relief and other activities, totaling nearly \$1 billion in 1997. Those outlays are offset by increased revenues of close to \$3 billion from temporarily reinstating the airline ticket taxes that had expired at the end of December 1996.

Economic and Technical Changes

Since CBO's last forecast, the economic news has been almost entirely upbeat. Strong economic growth has been coupled with low inflation, low unemployment, and stable interest rates. Those favorable conditions have contributed to a revised economic forecast that improves the budget outlook. Other changes in estimates that are not attributable to legislation or revisions in the economic forecast are known as technical reestimates, which, in this outlook, also reduce the deficit projections.

Revenues. As discussed above, changes in tax laws included in the reconciliation package enacted this year will reduce revenues through 2007. Those reductions,

however, are more than offset in CBO's new baseline by increases in projected revenues—\$427 billion through 2002 and more than \$1 trillion through 2007—that result from other factors. The most important of those factors are:

- o An increase in taxable income. That increase is the result of higher-than-expected income in recent quarters, as measured by the national income and product accounts (NIPAs), and an increase in the projected growth rate. Those revisions result in

Table 12.
Changes in CBO's Baseline Deficit Projections Since March 1997 (By fiscal year, in billions of dollars)

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--|------|------|------|------|------|------|------|------|------|------|------|
| March Baseline Deficit ^a | -115 | -122 | -149 | -172 | -167 | -188 | -202 | -220 | -255 | -268 | -278 |
| Policy Changes | | | | | | | | | | | |
| Reconciliation ^b | | | | | | | | | | | |
| Revenues | c | -9 | -7 | -23 | -27 | -15 | -29 | -31 | -33 | -34 | -35 |
| Outlays | c | 12 | -10 | -43 | -48 | -109 | -101 | -113 | -127 | -152 | -144 |
| Subtotal ^d | c | -21 | 3 | 20 | 21 | 95 | 72 | 83 | 94 | 118 | 109 |
| Other legislation ^d | 2 | c | c | c | c | c | c | c | c | c | c |
| Total Policy Changes ^d | 2 | -21 | 3 | 20 | 21 | 95 | 72 | 83 | 95 | 118 | 109 |
| Economic Changes | | | | | | | | | | | |
| Revenues | 23 | 41 | 45 | 47 | 50 | 57 | 68 | 80 | 94 | 108 | 124 |
| Net interest | | | | | | | | | | | |
| Interest rate effects | 1 | 6 | 4 | -4 | -7 | -10 | -12 | -14 | -16 | -18 | -19 |
| Debt service | c | -3 | -5 | -8 | -12 | -15 | -20 | -26 | -33 | -41 | -51 |
| Other outlays | -1 | -5 | -6 | -6 | -6 | -6 | -5 | -4 | -4 | -4 | -4 |
| Total Economic Changes ^d | 23 | 43 | 52 | 65 | 75 | 89 | 106 | 125 | 147 | 172 | 198 |
| Technical Changes | | | | | | | | | | | |
| Revenues | 46 | 37 | 26 | 22 | 17 | 17 | 18 | 19 | 25 | 23 | 25 |
| Net interest | | | | | | | | | | | |
| Debt service | -1 | -5 | -7 | -10 | -11 | -13 | -15 | -18 | -20 | -23 | -26 |
| Other | -2 | -1 | -1 | -1 | -1 | c | c | c | c | c | c |
| Other outlays | -7 | -1 | -7 | -6 | -6 | -6 | -4 | -5 | -5 | -5 | -5 |
| Total Technical Changes ^d | 56 | 44 | 41 | 38 | 34 | 36 | 37 | 41 | 50 | 50 | 56 |
| Total Changes ^d | 81 | 66 | 97 | 124 | 130 | 219 | 215 | 249 | 291 | 340 | 363 |
| Current Baseline Deficit (-) or Surplus ^e | -34 | -57 | -52 | -48 | -36 | 32 | 13 | 29 | 36 | 72 | 86 |

SOURCE: Congressional Budget Office.

- a. The baseline assumed that discretionary spending would equal the statutory cap in 1998 and grow at the rate of inflation in succeeding years. The economic forecast and the projections of revenues and mandatory spending assumed no change in policies that were current in March 1997.
- b. Reflects provisions in the Taxpayer Relief Act of 1997 (P.L. 105-34) and the Balanced Budget Act of 1997 (P.L. 105-33), which were enacted pursuant to reconciliation instructions included in the Congressional Budget Resolution for Fiscal Year 1998.
- c. Less than \$500 million.
- d. Includes changes in both revenues and outlays. The figure shown is the effect on the deficit or surplus. Increases in the surplus are shown as positive.
- e. The baseline assumes that discretionary spending will equal the newly enacted statutory caps on discretionary spending in 1998 through 2002 and will grow at the rate of inflation in succeeding years.

annual revenue increases that grow throughout the projection period.

- o An increase in 1997 revenues that exceeds the amount that would have been expected just from the increase in taxable income reported in the NIPA data. That increase cannot be fully explained by currently available data, and CBO assumes that only part of the increase is carried forward into future years.

As is customary, CBO has attributed to economic factors only the changes in projected revenues that result from changes in the NIPA data on the recent performance of the economy and from changes in CBO's projections of the path of those economic variables (see Chapter 1 for a discussion of CBO's current economic forecast). Changes in revenue projections that are explained by neither such economic data nor newly enacted legislation are called technical changes. Future revisions in the NIPA data may prove that some of the increases currently attributable to technical factors actually stem from changes in the economy, but CBO does not try to anticipate such revisions in its explanation of the reasons for current changes in the projections.

CBO's current projection of revenues for 1997 is \$71 billion higher than was anticipated in March. Legislation (primarily a bill that temporarily reinstated the airline ticket tax) accounts for only \$3 billion of the increase. As Table 12 shows, about one-third—\$23 billion—of the total increase is attributable to current data that indicate the economy grew faster and taxable income was higher in 1996 and 1997 than CBO had forecast last January (the economic forecast was not updated for the March baseline). The improved outlook for economic growth in 1998 and beyond generates even larger increases in projected revenues in those years—growing from \$41 billion in 1998 to \$124 billion in 2007.

The remaining \$46 billion increase in revenues in 1997 cannot be explained with any precision until the NIPA data are revised and income and liability data based on tax returns for 1996 and 1997 become available, but several factors that may have contributed to that increase were discussed in Box 3.

To the extent that the \$46 billion increase in 1997 is the result of a permanent change in the tax base, similar increases in revenues might be expected in future years. However, if most of that amount is the result of shifts in the timing of tax payments or other temporary factors, revenues in later years may not rise. Because information is not currently available to indicate how much of the increase is attributable to which factor, CBO assumes that approximately one-third of the unexplained increase carries over into future years, generating about \$15 billion a year in additional revenues in the long run.

Outlays. Reestimates of outlays for economic reasons primarily affect interest on the debt and programs that are subject to yearly cost-of-living increases. Other, technical factors that can cause changes in spending range from deviations in the timing of payments to administrative actions that decrease spending for entitlement benefits.

CBO's current forecast of interest rates is slightly higher than its previous one for 1997 and up to 0.5 percentage points higher for 1998. From 1999 on, though, the effect of the government's diminished participation in the credit market contributes to a reduction of 0.2 percentage points in short-term rates and 0.5 percentage points in long-term rates compared with CBO's previous forecast. Those changes increase net interest payments by \$6 billion in 1998; however, by 2007, net interest payments are down by \$19 billion for economic reasons (plus another \$51 billion as a result of lower debt-service costs).

The cost-of-living adjustment for Social Security and a number of other entitlement programs in 1998 is projected to be 0.6 percentage points lower than previously expected. The projected unemployment rate through 2001 is also lower. The combination of those two changes reduces outlays by \$5 billion in 1998 and similar amounts annually thereafter.

The bulk of the technical changes in outlays reflect debt-service savings on technical reestimates of revenues and outlays. Those savings grow to \$26 billion by 2007. Technical changes in outlays other than net interest reduce the deficit by \$7 billion, on balance, in 1997 and by similar amounts in future years.

Table 13.
Relationship of the Budget to the Federal Sector of the National Income and Product Accounts
(By fiscal year, in billions of dollars)

| | Actual 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Receipts | | | | | | | | | | | | |
| Revenue (Budget basis)* | 1,453 | 1,578 | 1,635 | 1,698 | 1,751 | 1,821 | 1,920 | 2,000 | 2,101 | 2,214 | 2,324 | 2,447 |
| Differences | | | | | | | | | | | | |
| Netting and grossing | | | | | | | | | | | | |
| Government contributions for employee retirement | 67 | 71 | 73 | 75 | 78 | 81 | 84 | 87 | 91 | 94 | 98 | 102 |
| Medicare premiums | 20 | 20 | 21 | 23 | 26 | 29 | 32 | 36 | 40 | 44 | 49 | 53 |
| Deposit insurance premiums | 2 | 7 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | b | b |
| Other | -3 | -3 | -5 | -6 | -7 | -7 | -7 | -7 | -10 | -10 | -11 | -12 |
| Geographic exclusions | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -4 | -4 | -4 | -4 | -4 |
| Other | 15 | 7 | 10 | -4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| Total | 97 | 100 | 98 | 86 | 98 | 104 | 110 | 116 | 122 | 129 | 136 | 145 |
| Receipts (NIPA basis) | 1,550 | 1,678 | 1,733 | 1,784 | 1,849 | 1,924 | 2,030 | 2,116 | 2,224 | 2,343 | 2,460 | 2,591 |
| Expenditures | | | | | | | | | | | | |
| Outlays (Budget basis)* | 1,560 | 1,612 | 1,691 | 1,750 | 1,799 | 1,857 | 1,888 | 1,987 | 2,073 | 2,178 | 2,253 | 2,361 |
| Differences | | | | | | | | | | | | |
| Netting and grossing | | | | | | | | | | | | |
| Government contributions for employee retirement | 67 | 71 | 73 | 75 | 78 | 81 | 84 | 87 | 91 | 94 | 98 | 102 |
| Medicare premiums | 20 | 20 | 21 | 23 | 26 | 29 | 32 | 36 | 40 | 44 | 49 | 53 |
| Deposit insurance premiums | 2 | 7 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | b | b |
| Other | -3 | -3 | -5 | -6 | -7 | -7 | -7 | -7 | -10 | -10 | -11 | -12 |
| Lending and financial transactions | 11 | 21 | 11 | 9 | 8 | 8 | 16 | 3 | 3 | 2 | 3 | 2 |
| Defense timing adjustment | 8 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Geographic exclusions | -10 | -9 | -10 | -10 | -11 | -11 | -12 | -12 | -13 | -13 | -14 | -15 |
| Treatment of investment and depreciation | 7 | 9 | 10 | 12 | 11 | 8 | 6 | 3 | b | -3 | -7 | -10 |
| Mandatory timing adjustment | 5 | 0 | 0 | 0 | 0 | 5 | -5 | 0 | 0 | 14 | 1 | -16 |
| Other | 13 | -2 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| Total | 119 | 114 | 102 | 103 | 104 | 110 | 112 | 107 | 108 | 126 | 116 | 103 |
| Expenditures (NIPA basis) | 1,679 | 1,727 | 1,793 | 1,852 | 1,903 | 1,967 | 2,000 | 2,094 | 2,181 | 2,304 | 2,369 | 2,464 |
| Deficit (-) or Surplus | | | | | | | | | | | | |
| Deficit (-) or Surplus (Budget basis)* | -107 | -34 | -57 | -52 | -48 | -36 | 32 | 13 | 29 | 36 | 72 | 86 |
| Differences | | | | | | | | | | | | |
| Lending and financial transactions | -11 | -21 | -11 | -9 | -8 | -8 | -16 | -3 | -3 | -2 | -3 | -2 |
| Defense timing adjustment | -8 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Geographic exclusions | 8 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 10 | 10 |
| Treatment of investment and depreciation | -7 | -9 | -10 | -12 | -11 | -8 | -6 | -3 | b | 3 | 7 | 10 |
| Mandatory timing adjustment | -5 | 0 | 0 | 0 | 0 | -5 | 5 | 0 | 0 | -14 | -1 | 16 |
| Other | 1 | 10 | 12 | -2 | 6 | 7 | 7 | 7 | 8 | 8 | 7 | 8 |
| Total | -22 | -14 | -4 | -17 | -5 | -7 | -2 | 9 | 14 | 4 | 20 | 42 |
| Deficit (-) or Surplus (NIPA basis) | -129 | -48 | -60 | -69 | -54 | -43 | 30 | 23 | 43 | 39 | 92 | 128 |

SOURCE: Congressional Budget Office.

a. Includes Social Security and Postal Service.

b. Less than \$500 million.

Table 14.
Projections of Baseline Receipts and Expenditures Measured by the National Income and Product Accounts
(By fiscal year, in billions of dollars)

| | Actual 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--|----------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|
| Receipts | | | | | | | | | | | | |
| Personal Tax and Nontax Receipts | 664 | 750 | 774 | 788 | 811 | 848 | 899 | 942 | 997 | 1,054 | 1,116 | 1,182 |
| Corporate Profits Tax Accruals | 192 | 197 | 202 | 204 | 206 | 207 | 211 | 216 | 224 | 232 | 242 | 253 |
| Indirect Business Tax and Nontax Accruals | 91 | 94 | 92 | 96 | 103 | 106 | 117 | 117 | 119 | 122 | 124 | 128 |
| Contributions for Social Insurance | <u>603</u> | <u>636</u> | <u>665</u> | <u>696</u> | <u>730</u> | <u>763</u> | <u>802</u> | <u>841</u> | <u>884</u> | <u>934</u> | <u>978</u> | <u>1,029</u> |
| Total | 1,550 | 1,678 | 1,733 | 1,784 | 1,849 | 1,924 | 2,030 | 2,116 | 2,224 | 2,343 | 2,460 | 2,591 |
| Expenditures | | | | | | | | | | | | |
| Purchases of Goods and Services | | | | | | | | | | | | |
| Defense | | | | | | | | | | | | |
| Consumption | 244 | 255 | 254 | 258 | 283 | 287 | 309 | 317 | 325 | 338 | 341 | 344 |
| Consumption of fixed capital | 57 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 59 | 59 | 59 |
| Nondefense | | | | | | | | | | | | |
| Consumption | 134 | 131 | 131 | 132 | 118 | 133 | 111 | 119 | 119 | 117 | 109 | 134 |
| Consumption of fixed capital | <u>11</u> | <u>11</u> | <u>12</u> | <u>12</u> | <u>12</u> | <u>13</u> | <u>13</u> | <u>14</u> | <u>14</u> | <u>15</u> | <u>15</u> | <u>16</u> |
| Subtotal | 447 | 455 | 455 | 461 | 472 | 491 | 491 | 507 | 516 | 528 | 524 | 553 |
| Transfer Payments | | | | | | | | | | | | |
| Domestic | 738 | 773 | 814 | 865 | 920 | 969 | 1,019 | 1,084 | 1,149 | 1,247 | 1,296 | 1,342 |
| Foreign | <u>14</u> | <u>13</u> | <u>13</u> | <u>13</u> | <u>14</u> | <u>14</u> | <u>14</u> | <u>14</u> | <u>14</u> | <u>15</u> | <u>15</u> | <u>16</u> |
| Subtotal | 752 | 785 | 827 | 879 | 934 | 982 | 1,033 | 1,098 | 1,163 | 1,262 | 1,311 | 1,358 |
| Grants-in-Aid to State and Local Governments | 216 | 221 | 243 | 253 | 259 | 270 | 280 | 296 | 312 | 331 | 351 | 373 |
| Net Interest | 226 | 229 | 233 | 234 | 226 | 221 | 217 | 214 | 211 | 207 | 202 | 197 |
| Subsidies Minus Current Surplus of Government Enterprises | 37 | 37 | 39 | 39 | 39 | 38 | 39 | 40 | 42 | 43 | 45 | 47 |
| Required Reductions in Discretionary Spending ^a | <u>n.a.</u> | <u>n.a.</u> | <u>-4</u> | <u>-13</u> | <u>-26</u> | <u>-36</u> | <u>-61</u> | <u>-61</u> | <u>-62</u> | <u>-67</u> | <u>-65</u> | <u>-64</u> |
| Total | 1,679 | 1,727 | 1,793 | 1,852 | 1,903 | 1,967 | 2,000 | 2,094 | 2,181 | 2,304 | 2,369 | 2,464 |
| Deficit (-) or Surplus | | | | | | | | | | | | |
| Deficit (-) or Surplus | -129 | -48 | -60 | -69 | -54 | -43 | 30 | 23 | 43 | 39 | 92 | 128 |

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable.

a. Unspecified reductions needed to comply with the statutory caps on discretionary spending.

In 1997, defense spending is expected to be \$3 billion higher as a result of faster spending on operation and maintenance, procurement, and research and development. A delay in a planned reestimate of subsidy costs for student loans pushes outlays up by almost \$3 billion, and transportation spending is about \$1 billion higher than previously projected. Those increases are offset by reductions in other areas such as Medicaid (\$3 billion), family support (\$3 billion), unemployment insurance (\$1 billion), SSI (\$1 billion), deposit insurance (\$1 billion), disability insurance (\$1 billion), and general government programs (\$1 billion).

The Federal Sector of the National Income and Product Accounts

The projections summarized so far in this chapter draw on the usual labels—revenues by source, outlays by category—that are familiar to policymakers. Economists, though, often use another approach for measuring the government's activities. The federal sector of the national income and product accounts divides the government's spending and receipts into categories that are conventionally used to analyze domestic production and income. That categorization allows economists to track the relationship between the government and other sectors of the economy.

Just a few major differences distinguish the NIPA versions of federal receipts and expenditures from their counterparts in the budget. Netting and grossing adjustments move some collections, mainly those labeled offsetting receipts in the budget, from the spending to the receipts side of the NIPAs (see Table 13 on page 46). Most collections are recorded in the budget as negative outlays because they do not result from the government's taxing power. Shifting them to the receipts side of the NIPA ledger gives users a fuller picture of government receipts, regardless of source, and does not affect the total deficit.

Macroeconomic analysis typically disregards transactions that merely reflect the transfer of existing assets and liabilities and do not contribute to current production. The NIPAs therefore exclude lending and financial transactions that appear in the budget. Prominent among such adjustments are those for deposit insurance

outlays, cash flows for direct loans made before credit reform, and the Federal Communications Commission's auctions of portions of the electromagnetic spectrum. Other, relatively minor factors that cause the NIPA and budget totals to diverge are geographic adjustments (the exclusion of Puerto Rico, the Virgin Islands, and a few other areas from domestic economic statistics) and timing adjustments (such as adjustments for irregular numbers of benefit checks or paychecks because of calendar quirks).

The NIPAs and the unified budget also differ in their treatment of investment and capital consumption. The unified budget includes all federal government expenditures, including purchases such as buildings and aircraft carriers, that could be considered investments. The NIPA version shows the current, or operating, account for the federal government; consequently, government investment is left out, and the government's consumption of fixed capital (depreciation) is included.

The NIPA federal sector generally portrays receipts according to their sources and expenditures according to their purpose and destination (see Table 14 on page 47). Receipts are split into four large categories—personal tax and nontax receipts, corporate profits tax accruals, indirect business tax and nontax accruals, and contributions for social insurance—whose labels summarize the nature of the collection and the identity of the payer. The term "nontax" indicates that NIPA receipts include some charges, such as fees and premiums, that are not generally treated as revenues in the budget.

Federal spending can take the form of defense and nondefense purchases (which enter directly into GDP), transfers (most of which find their way into personal income and from there into consumption or saving), grants to state and local governments (which may end up as state and local purchases or transfers), net interest, and subsidies minus the current surplus of government enterprises such as the Postal Service and public housing authorities. A final category—required reductions in discretionary spending—is included because of the discretionary spending caps that are mandated by law. Those caps will limit future spending for programs funded through the appropriation process. Although no one can predict how particular programs will fare, the deepest effects of the required reductions will almost certainly be felt in the NIPA categories of defense and nondefense purchases and grants.

Appendixes

Evaluating CBO's Record of Economic Forecasts

Since the Congressional Budget Office issued its first forecast in 1976, CBO has compiled a record of economic predictions that compares favorably with the track records of five Administrations and the consensus forecasts of a sizable sample of private-sector economists. Although the margin is slight, CBO's forecasts have generally been closer than the Administration's to the actual values of several economic indicators that are important for projecting the budget. Moreover, during the 14 years for which comparisons are possible, CBO's forecasts have been about as accurate as the average of the 50 or so forecasts that make up the *Blue Chip* consensus survey. Comparing CBO's forecasts with that survey suggests that when CBO's economic predictions missed the mark by a margin wide enough to contribute to sizable misestimates of the deficit, those errors probably reflected limitations that confronted all forecasters.

Those conclusions echo the findings of previous studies published by the Congressional Budget Office and other government and academic reviewers. They emerge from an evaluation of the accuracy of short-term forecasts for four economic indicators: growth in real (inflation-adjusted) output, inflation in the consumer price index (CPI), interest rates on three-month Treasury bills in both nominal and real terms, and interest rates on 10-year Treasury notes and Aaa corporate bonds. In carrying out this evaluation, CBO compiled two-year averages of its forecasts for the four indicators and compared them with historical values as well as with the corresponding forecasts of the Administration and the *Blue Chip* consensus. In addition to these eco-

nomic indicators, a measure of taxable incomes—wage and salary distributions plus corporate profits—is also examined and compared with the Administration's forecasts.

Both CBO and the Administration have tended to err on the side of optimism in their forecasts over a two-year period. In other words, the average forecast error for real growth was an overestimate, and the average error for inflation was an underestimate. The Administration has been more optimistic than CBO in forecasting nominal interest rates. Overall, the average errors in the Administration's two-year forecasts were slightly greater than in CBO's. Finally, CBO's forecasts appear to be about as accurate as those of the *Blue Chip* consensus over the period for which comparable *Blue Chip* forecasts are available (1982-1995).

CBO's and the Administration's longer-term (five-year) projections of average growth in real output were generally optimistic, but CBO's errors were generally much smaller than the Administration's. For the longer-term projections of real output, CBO's errors averaged only slightly larger than those in its short-term forecasts of real output. Again, CBO's projections were about as accurate as those of the *Blue Chip* consensus over the comparable period (1979-1992).

The differences among the three forecasts, however, are not large enough to be statistically significant. The small number of forecasts available for analysis makes it difficult to distinguish meaningful differences in their performance from those that might arise ran-

domly. Thus, the statistics presented here are not reliable indicators of the future performance of any of the forecasters.

Sources of Data for the Evaluation

Evaluating CBO's forecasting record requires compiling the basic historical and forecast data for growth in real output, CPI inflation, interest rates, and taxable incomes. Although each of these series has an important influence on budget projections, an accurate forecast of the two-year average growth in real output is the most critical economic factor in accurately estimating the deficit for the upcoming budget year. Two-year average forecasts published in early 1996 and 1997 could not be included in this evaluation because historical values for 1997 and 1998 are, of course, not yet available. The data were therefore compiled using forecasts published early in the years 1976 through 1995.

Selection of Historical Data

Which historical data to use for the evaluation was dictated by the availability of actual data and the nature of the individual forecasts examined. Although CBO, the Administration, and *Blue Chip* all published the same measure for real output growth, selecting a historical series was difficult because of periodic benchmark revisions in the actual data.¹ By comparison, not all of the forecasters published the same measures for CPI inflation and interest rates, but the selection of historical data for those series was clear-cut.

Real Output Growth. Historical two-year averages of growth in real output were developed from calendar year averages of the quarterly chain-type, annual-weighted indexes of real gross national product (GNP) and real gross domestic product (GDP) published by the Bureau of Economic Analysis (BEA). The fact that several real GNP and GDP series were discontinued

because of periodic benchmark revisions meant that they were unsuitable historical series. For example, during the 1976-1985 period, the three forecasters published estimates for a measure of growth in real GNP that was based on 1972 prices, which was the measure published by BEA at the time. In late 1985, however, BEA discontinued this 1972-dollar series and began to publish GNP on a 1982-dollar basis. As a result, an official series of values for GNP growth in 1972 dollars is not available for the years after 1984; thus, actual two-year average growth rates are not available to compare with the forecasts made in early 1984 and 1985.

From 1986 to 1991, forecasters published estimates of growth in real GNP based on 1982 prices. BEA revised the benchmark again in the second half of 1991; it discontinued the 1982-dollar GNP and began to publish GNP on a 1987-dollar basis.² Consequently, the historical annual series for 1982-dollar GNP is available only through 1990, and actual two-year average growth rates are not available for the forecasts made in early 1990 and 1991. The forecasters then published estimates of growth in real GDP on a 1987-dollar basis until 1995, when BEA made another switch, late in the year, to a chain-weighted measure of GDP. Therefore, the historical annual series for 1987-dollar GDP ends with the 1994 annual value, and actual two-year average growth rates are not available for the forecasts made in early 1994 and 1995.

By periodically updating the series to reflect more recent prices, BEA's benchmark revisions yield a measure of real output that is more relevant for analyzing contemporary movements in real growth. But the process makes it difficult to evaluate forecasts of real growth produced over a period of years for series that are subsequently discontinued. The difficulties presented by periodic revisions of the data are avoided here by using one of BEA's alternative measures of real GNP and GDP, the chain-type annual-weighted index.³

CPI Inflation. Two-year averages of inflation in the consumer price index were calculated from calendar

1. Before 1992, CBO, the Office of Management and Budget, and *Blue Chip* used gross national product to measure output. Beginning in early 1992, however, all three forecasters began to publish forecasts and projections of gross domestic product instead.

2. As of the 1992 benchmark revision, GDP replaced GNP as the central measure of national output.

3. For a discussion of this index, see Congressional Budget Office, *The Economic and Budget Outlook: An Update* (August 1995), pp. 71-73.

year averages of monthly data published by the Bureau of Labor Statistics. Before 1978, the bureau published only one consumer price index series, now known as the CPI-W (the price index for urban wage earners and clerical workers). In January 1978, however, it began to publish a second, broader consumer price index series, the CPI-U (the price index for all urban consumers). CBO's comparison of forecasts used both series.

Until 1992, the Administration published its forecasts for the CPI-W, the measure used to index most of the federal government's expenditures for entitlement programs. By contrast, for all but four of its forecasts since 1979 (1986 through 1989), CBO based its inflation forecast on the CPI-U, a more widely cited measure of inflation and the one now used to index federal income tax brackets. The *Blue Chip* consensus has always published its forecast of the CPI-U. Although both the CPI-U and CPI-W may be forecast with the same relative ease, and annual fluctuations in the two series are virtually indistinguishable, they differ in some years; for that reason, CBO used historical data for both series to evaluate the alternative forecast records.

Interest Rates. Two-year averages of nominal short- and long-term interest rates were developed from calendar year averages of monthly data published by the Board of Governors of the Federal Reserve System.

The forecasts of short-term interest rates were compared using historical values for two measures of the interest rate on three-month Treasury bills: the new-issue rate and the secondary-market rate. The Administration forecasts the new-issue rate, which corresponds to the price of three-month bills auctioned by the Treasury Department—that is, it reflects the interest actually paid on that debt. CBO forecasts the secondary-market rate, which corresponds to the price of the three-month bills traded outside the Treasury auctions. Because such transactions occur continually in markets that involve many more traders than do Treasury auctions, the secondary-market rate provides an updated evaluation of the short-term federal debt by the wider financial community. *Blue Chip* has alternated between these two rates; it published the new-issue rate from 1982 to 1985, switched to the secondary-market rate during the 1986-1991 period, and then returned to the new-issue rate in 1992. Clearly, there is no reason to expect the

two rates to differ persistently; indeed, the differences between their calendar year averages are miniscule.

The Congressional Budget Office likewise compared the various forecasts of long-term interest rates using historical values for two measures of long-term rates: the 10-year Treasury note rate and Moody's Aaa corporate bond rate. A comparison of forecasts is only possible beginning in 1984 because not all of the forecasters published projections of long-term interest rates before that year. For forecasts made in early 1984 and 1985, CBO projected the Aaa corporate bond rate. Beginning with its early 1986 forecast, however, CBO switched to the 10-year Treasury note rate. The Administration has always published its projection for the 10-year Treasury note rate, but *Blue Chip* has published the Aaa corporate bond rate.

CBO calculated separate historical values for real short-term interest rates using the nominal short-term interest rate and inflation rate appropriate for each forecaster. In each case, the two-year average nominal interest rate was discounted by the two-year average rate of inflation. The resulting real short-term interest rates were very similar. Because there is no agreed-upon method for calculating real long-term interest rates, they were not included in the evaluation.

Taxable Incomes. Through its influence on the projection for federal government revenues, the forecast for taxable incomes plays a critical role in determining the accuracy of the deficit projection. The income measure examined here—wage and salary distributions plus the book value of corporate profits—combines the two sources of income to which tax receipts are most sensitive. Because the effective rates of tax on wages (including payroll and income taxes) and corporate profits are nearly the same and because these tax rates exceed the rate of taxation of other income sources (such as interest income), it is appropriate to consider wages and profits together.

Although the level of taxable incomes is the factor that most directly affects federal revenue, historical estimates of the levels of incomes are subject to substantial statistical revision. As a result, using the *levels* of taxable income would distort the forecast comparison. Instead, the forecasts are presented here as *changes* in taxable incomes as a share of total income; the histori-

cal revisions, carried forward consistently to projections, should not affect projections of revenues. Moreover, the shares formulation is closer to the concept that macroeconomists consider when they construct their forecasts.

Sources of Forecast Data

With the exception of the measures of taxable incomes, the evaluation used calendar year forecasts and projections, which CBO has published early each year since 1976, timed to coincide with the publication of the Administration's budget proposals. The Administration's forecasts were taken from its budget in all but one case; the forecast made in early 1981 came from the Reagan Administration's revisions of President Carter's last budget. The corresponding CBO forecast was taken from CBO's published analysis of President Reagan's budget proposals. That forecast did not include the economic effects of the new Administration's fiscal policy proposals.⁴

The average two-year forecasts of the *Blue Chip* consensus survey were taken from those published in the same month as CBO's forecasts. Because the *Blue Chip* consensus did not begin publishing its two-year forecasts until the middle of 1981, the first consensus forecast available for use in this comparison was published in early 1982. Average five-year projections, however, are published by *Blue Chip* only two or three times a year. All but one of its five-year projections used in this evaluation were published in March; the 1980-1984 projection was published in May.

Since 1985, the Congressional Budget Office has regularly included projections of economic profits and wage and salary disbursements in *The Economic and Budget Outlook*. Because book profits more closely reflect the corporate profits tax base than do economic profits, forecasts of book profits were extracted from CBO's unpublished forecast files. Unpublished CBO forecasts are used for both profits and wages for the period from 1980 through 1984.

4. Another exceptional case occurred in early 1993, when the Clinton Administration adopted CBO's economic assumptions as the basis for its budget. Because of that, the errors for the early 1993 forecast are virtually the same for CBO and the Administration.

Measuring Forecast Performance

Following earlier studies of economic forecasts, the evaluation of CBO's forecasts focused on two aspects of their performance: statistical bias and accuracy.

Bias

The statistical bias of a forecast is the extent to which the forecast can be expected to differ from what actually occurs. CBO's evaluation used the *mean error* to measure statistical bias. That statistic—the arithmetic average of all the forecast errors—is the simplest and most widely used measure of forecast bias. Because the mean error is a simple average, however, underestimates and overestimates offset each other in calculating it. As a result, the mean error imperfectly measures the quality of a forecast—a small mean error would result if all the errors were small or if all the errors were large but the overestimates and underestimates happened to balance out.

Accuracy

The accuracy of a forecast is the degree to which forecast values are narrowly dispersed around actual outcomes. Measures of accuracy more clearly reflect the usual meaning of forecast performance than does the mean error. The evaluation used two measures of accuracy. The *mean absolute error*—the average of the forecast errors without regard to arithmetic sign—indicates the average distance between forecasts and actual values without regard to whether individual forecasts are overestimates or underestimates. The *root mean square error*—calculated by first squaring all the errors, then taking the square root of the arithmetic average of the squared errors—also shows the size of the error without regard to sign, but it gives greater weight to larger errors.

Measurement Issues

In addition to those three statistical indicators, there are many other measures of forecast performance. To test

for statistical bias in CBO's forecasts, studies by analysts outside CBO have used measures that are slightly more elaborate than the mean error. Those studies have generally concluded, as does this evaluation, that CBO's short-term economic forecasts do not contain a statistically significant bias.⁵

In addition, a number of methods have been developed to evaluate a forecast's efficiency. Efficiency indicates the extent to which a particular forecast could have been improved by using additional information that was at the forecaster's disposal when the forecast was made.⁶ The *Blue Chip* consensus forecasts represent a wide variety of economic forecasters and thus reflect a broader blend of sources and methods than can be expected from any single forecaster. The use of the *Blue Chip* predictions in this evaluation can therefore be interpreted as a proxy for an efficient forecast. The fact that CBO's forecasts are about as accurate as *Blue Chip*'s is a rough indication of their efficiency.

Such elaborate measures and methods, however, are not necessarily reliable indicators when the sample of observations is small, such as the 20 observations that make up the sample of CBO's two-year forecasts. Small samples present three main types of problems for evaluating forecasts, including forecasts based on the simple measures presented here. First, small samples

reduce the reliability of statistical tests that are based on the assumption that the underlying population of forecast errors follows a normal distribution. The more elaborate tests of forecast performance all make such an assumption about the hypothetical ideal forecast with which the actual forecasts are compared. Second, in small samples, individual forecast errors have a relatively large weight in the calculation of summary measures. The mean error, for example, can fluctuate in arithmetic sign when a single observation is added to a small sample. Third, the small sample means that CBO's track record cannot be used in a statistically reliable way to indicate either the direction or the size of future forecasting errors.

Apart from the general caution that should attend statistical conclusions based on small samples, there are several other reasons to view this evaluation of CBO's forecasts with particular caution. First, the procedures and purposes of CBO's and the Administration's forecasts have changed over the past 20 years and may change again in the future. For example, in the late 1970s, CBO characterized its long-term projections as a goal for the economy, whereas it now considers its projections to be what will prevail on average if the economy continues to reflect historical trends. Second, an institution's forecasting track record may not foretell its future abilities because of changes in personnel or methods. Finally, forecast errors increase when the economy is more volatile. All three forecasters made exceptionally large errors when forecasting for periods that included turning points in the business cycle.

5. Another approach to testing a forecast for bias is based on linear regression analysis of actual and forecast values. For details of that method, see J. Mincer and V. Zarnowitz, "The Evaluation of Economic Forecasts," in J. Mincer, ed., *Economic Forecasts and Expectations* (New York: National Bureau of Economic Research, 1969). That approach is not used here because of the small sample size. However, previous studies that have used it to evaluate the short-term forecasts of CBO and the Administration have not been able to reject the hypothesis that those forecasts are unbiased. See, for example, M.T. Belongia, "Are Economic Forecasts by Government Agencies Biased? Accurate?" *Review*, Federal Reserve Bank of St. Louis, vol. 70, no. 6 (November/December 1988), pp. 15-23.

6. For studies that have examined the relative efficiency of CBO's forecasts, see Belongia, "Are Economic Forecasts by Government Agencies Biased?"; and S.M. Miller, "Forecasting Federal Budget Deficits: How Reliable Are U.S. Congressional Budget Office Projections?" *Applied Economics*, vol. 23 (December 1991), pp. 1789-1799. Although both of the studies identify series that might have been used to make CBO's forecasts more accurate, they rely on statistics that assume a larger sample than is available. Moreover, although statistical tests can identify sources of inefficiency in a forecast after the fact, they generally do not indicate how such information can be used to improve forecasts when they are made.

CBO's Forecasting Record

This analysis evaluated the Congressional Budget Office's forecasts over two-year and five-year periods. The period of most interest for forecasters of the budget is two years. Because the Administration's and CBO's winter budget publications focus on the budget projection for the fiscal year beginning in the following October, an economic forecast that is accurate not only for the months leading up to the budget year but also for the budget year itself will provide the basis for a more accurate forecast of the deficit. A five-year period is used to examine the accuracy of longer-term projections of growth in real output.

Short-Term Forecasts

Historically, the Congressional Budget Office's two-year forecasts are slightly more accurate than the Administration's and suffer from slightly less statistical bias. In most cases, however, the differences are small. Furthermore, CBO's forecasts are about as accurate as *Blue Chip*'s average forecasts.

An accurate prediction of two-year growth in real output is the most important factor in minimizing errors when forecasting the deficit for the budget year. Accurate predictions of nominal output, inflation, and nominal interest rates are less important for forecasting deficits now than they were in the late 1970s and early 1980s. The reason is that given current law and the level of the national debt, inflation increases both revenues and outlays by similar amounts. Revenues increase with inflation because taxes are levied on nominal incomes. Outlays increase because various entitlement programs are indexed to inflation and because nominal interest rates tend to increase with inflation, which in turn raises the cost of servicing the federal debt.⁷

Real Output Growth. For the two-year forecasts made between 1976 and 1995, CBO had a slightly better record than the Administration in predicting growth in real output (see Table A-1). On average, both CBO's and the Administration's forecasts tended to be overestimates. CBO was closer to the actual value in 12 of the 20 forecasts made between 1976 and 1995, the Administration was closer in five periods, and both had identical errors in three periods. CBO's predictions of real growth made between 1982 and 1995 were, on average, as accurate as those of the *Blue Chip* consensus.

Forecast errors tend to be larger when the economy is more unstable. That tendency can be clearly seen in the forecasts of real GNP growth by comparing the large errors for 1979 through 1983—when the economy went through its most turbulent recessionary period of the postwar era—with the smaller errors recorded for later years. Similarly, the recent business cycle ac-

counts for the large errors in the predictions made in the 1989-1991 period; during that time, the Congressional Budget Office's errors were only slightly larger than those of the *Blue Chip* consensus.

Since 1992, all three forecasters—CBO, the Administration, and the *Blue Chip*—have predicted real GDP growth with striking accuracy. The relatively steady growth trend for real GDP in the 1990s is likely to be a primary influence on this improved record. Consequently, the improvement cannot be relied upon to continue.

CPI Inflation. The records for forecasting the average annual growth in the consumer price index over a two-year period were very similar (see Table A-2). Both CBO and the Administration underestimated future inflation in their forecasts for 1977 through 1980, and both tended to overestimate it in their forecasts for 1981 through 1986. The average measures of bias and accuracy were virtually the same for CBO and the Administration. CBO was closer to the actual value in seven of the 20 periods, the Administration was closer in nine periods, and the two forecasts had identical errors in four periods. For the 1982-1995 period, CBO's forecasts of inflation were as accurate as those of both the Administration and *Blue Chip*. Moreover, the track records of CBO and the Administration in predicting inflation both seem to have improved in the 1990s.

Nominal Interest Rates. For the 1976-1995 forecasts, CBO's record was about as accurate as the Administration's for nominal short-term interest rates over a two-year period (see Table A-3). On average, the Administration tended to underestimate nominal short-term interest rates; CBO's mean error was zero over this period. CBO was closer to the true value in nine of the 20 periods, the Administration was closer in 10 periods, and the two forecasters had identical errors in one period. For the 1982-1995 period, however, the root mean square error of CBO's forecasts was slightly above those of the Administration and *Blue Chip*, which means that CBO made a few relatively large errors (such as those in 1982 and 1983).

For the 1984-1995 forecasts of long-term interest rates, CBO did somewhat better than the Administration (see Table A-4). The Administration tended to underestimate rates, and its mean error was larger than CBO's. In addition, the Administration's forecasts had

7. Rules of thumb for estimating the effect on the deficit of changes in various macroeconomic variables are given in Congressional Budget Office, *The Economic and Budget Outlook: Fiscal Years 1998-2007* (January 1997), pp. 91-95.

a larger mean absolute error and root mean square error. CBO was closer to the true value in eight of the 12 periods, the Administration was closer in three periods, and the two forecasters had identical errors in one period.

The Congressional Budget Office's forecasts of long-term interest rates were about as accurate as those of the *Blue Chip* consensus. Both CBO and *Blue Chip* tended to overestimate long-term rates. CBO had a mean error of 0.2 percentage points compared with 0.3 percentage points for *Blue Chip*.

Real Short-Term Interest Rates. For the forecasts made in 1976 through 1995, CBO had a slight edge over the Administration in estimating real short-term interest rates (see Table A-5). Again, the Administration was more likely than CBO to underestimate interest rates and its mean error was greater. CBO and the Administration recorded similar mean absolute and root mean square errors. CBO's forecasts were closer to the actual value in 11 of the 20 periods, the Administration's were closer in eight, and the two registered identical errors in one period. For forecasts made between 1982 and 1995, CBO's errors were generally similar in both direction and magnitude to those of the *Blue Chip* consensus.

Taxable Incomes. One of the greatest sources of error in forecasts of the deficit derives from projections of taxable incomes. On average, both CBO and the Administration have been too optimistic in their projections of the major components of taxable incomes (see Table A-6).

In general, the most significant overstatement of taxable-income shares took place in the early 1980s when both agencies substantially overestimated wages and profits as a share of output. In part, that overstatement stems from legislation (the Accelerated Cost Recovery System of the Economic Recovery Tax Act of 1981), which allowed corporations to shunt income away from taxable categories (book profits) to nontaxable or tax-favored categories (capital consumption). As a result of legislation that could not have been predicted when the early forecasts were made, the profit share and hence the taxable-incomes share was well below what it would have been in the absence of legislation.

In recent years however, both CBO and the Administration have significantly underestimated the change in the wage and profit share. The rapid growth in corporate profits and dividends in both 1995 and 1996 reported in the July 1997 revisions of the national income and product accounts surprised most analysts.

Longer-Term Projections

In projecting real GNP growth for the more distant future, measured here as five years ahead, the Administration's errors were larger than CBO's (see Table A-7). Although that comparative advantage for CBO does not directly affect the estimates of the deficit for the budget year, accuracy in the longer term is obviously important for budgetary planning over several years. Neither the Administration nor CBO, however, considers its projections to be its best guess about the year-to-year course of the economy. The Administration's projections each year are based on the adoption of the President's budget as submitted, and for most years CBO has considered its projections an indication of the average future performance of the economy if major historical trends continue. Neither institution attempts to anticipate cyclical fluctuations in the projection period.

CBO's projections of longer-term growth in real output were closer than the Administration's to the actual value in 14 of the 17 periods. The Administration's projections showed an upward bias of 1.2 percentage points compared with an upward bias of 0.8 percentage points for CBO. Those biases occurred largely because the projections made in early 1976 through 1979, which CBO and the Administration presented as target rates of growth, did not incorporate the recessions of 1980 and 1982. Through the subsequent years of expansion until the most recent recession, the upward bias was much smaller for the Administration's projections and even smaller for CBO's.

The size of the root mean square errors for the entire period for CBO and, to a lesser extent, for the Administration also resulted largely from errors in projections made during the first four years. CBO was more accurate in its winter projections made in the 1980-1982 period but had a lesser edge in later years. Again, CBO's projections were about as accurate as those of the *Blue Chip* consensus over the comparable period.

Table A-1.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Growth Rates for Real Output (By calendar year, in percent)

| | Actual | | | Chain-Type Annual- Weighted Index | CBO | | Administration | | Blue Chip | |
|-----------------------------|---------|---------|---------|--|----------|-------|----------------|-------|-----------|-------|
| | 1972 | 1982 | 1987 | | | | | | | |
| | Dollars | Dollars | Dollars | | Forecast | Error | Forecast | Error | Forecast | Error |
| GNP | | | | | | | | | | |
| 1976-1977 | 6.7 | 4.8 | 4.8 | 5.1 | 6.2 | 1.1 | 5.9 | 0.8 | a | a |
| 1977-1978 | 5.2 | 5.0 | 4.7 | 5.0 | 5.5 | 0.5 | 5.1 | 0.1 | a | a |
| 1978-1979 | 3.9 | 3.9 | 3.8 | 4.2 | 4.7 | 0.5 | 4.7 | 0.5 | a | a |
| 1979-1980 | 1.3 | 1.1 | 1.1 | 1.4 | 2.7 | 1.4 | 2.9 | 1.5 | a | a |
| 1980-1981 | 1.1 | 0.9 | 0.5 | 0.9 | 0.5 | -0.3 | 0.5 | -0.3 | a | a |
| 1981-1982 | 0.2 | -0.3 | -0.4 | -0.1 | 2.1 | 2.2 | 2.6 | 2.7 | a | a |
| 1982-1983 | 0.7 | 0.5 | 0.7 | 0.8 | 2.1 | 1.3 | 2.7 | 1.9 | 2.0 | 1.2 |
| 1983-1984 | 5.2 | 5.2 | 4.9 | 5.4 | 3.4 | -2.0 | 2.6 | -2.7 | 3.5 | -1.9 |
| 1984-1985 | b | 5.1 | 4.4 | 5.1 | 4.7 | -0.3 | 4.7 | -0.4 | 4.3 | -0.8 |
| 1985-1986 | b | 3.0 | 2.8 | 3.1 | 3.3 | 0.3 | 3.9 | 0.9 | 3.2 | 0.1 |
| 1986-1987 | b | 3.1 | 2.9 | 2.9 | 3.1 | 0.3 | 3.7 | 0.8 | 3.0 | 0.1 |
| 1987-1988 | b | 3.9 | 3.5 | 3.4 | 2.9 | -0.5 | 3.3 | -0.1 | 2.8 | -0.5 |
| 1988-1989 | b | 3.5 | 3.3 | 3.6 | 2.4 | -1.2 | 3.0 | -0.6 | 2.1 | -1.5 |
| 1989-1990 | b | 1.7 | 2.0 | 2.3 | 2.5 | 0.2 | 3.2 | 0.9 | 2.2 | -0.1 |
| 1990-1991 | b | c | 0.3 | 0.2 | 2.0 | 1.9 | 2.8 | 2.6 | 1.9 | 1.8 |
| 1991-1992 | b | c | 0.7 | 0.8 | 1.6 | 0.8 | 1.4 | 0.6 | 1.2 | 0.4 |
| GDP ^d | | | | | | | | | | |
| 1992-1993 | b | c | 2.7 | 2.5 | 2.6 | 0.1 | 2.2 | -0.3 | 2.3 | -0.2 |
| 1993-1994 | b | c | 3.6 | 2.9 | 2.9 | 0 | 2.9 | 0 | 3.0 | 0.2 |
| 1994-1995 | b | c | e | 2.7 | 2.8 | 0.1 | 2.9 | 0.2 | 2.8 | 0.1 |
| 1995-1996 | b | c | e | 2.4 | 2.4 | 0.1 | 2.6 | 0.3 | 2.6 | 0.3 |
| Statistics for 1976-1995 | | | | | | | | | | |
| Mean error | * | * | * | * | * | 0.3 | * | 0.5 | * | * |
| Mean absolute error | * | * | * | * | * | 0.7 | * | 0.9 | * | * |
| Root mean square error | * | * | * | * | * | 1.0 | * | 1.3 | * | * |
| Statistics for 1982-1995 | | | | | | | | | | |
| Mean error | * | * | * | * | * | 0.1 | * | 0.3 | * | -0.1 |
| Mean absolute error | * | * | * | * | * | 0.6 | * | 0.9 | * | 0.7 |
| Root mean square error | * | * | * | * | * | 0.9 | * | 1.2 | * | 0.9 |

SOURCES: Congressional Budget Office; Office of Management and Budget; Capitol Publications, Inc., *Blue Chip Economic Indicators*; Department of Commerce, Bureau of Economic Analysis.

NOTES: Actual values are the two-year growth rates for real gross national product (GNP) and gross domestic product (GDP) last reported by the Bureau of Economic Analysis, not the first reported values. Forecast values are for the average annual growth of real GNP or GDP over the two-year period. The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate. The chain-type annual-weighted index of actual GNP or GDP was used in calculating the errors.

* = not applicable.

- a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.
- b. Data for 1972-dollar GNP and GDP are available only through the third quarter of 1985.
- c. Data for 1982-dollar GNP and GDP are available only through the third quarter of 1991.
- d. With the 1992 benchmark revision, GDP replaced GNP as the central measure of national output.
- e. Data for 1987-dollar GNP and GDP are available only through the second and third quarters, respectively, of 1995.

Table A-2.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Inflation Rates in the Consumer Price Index (By calendar year, in percent)

| | Actual | | CBO | | Administration | | Blue Chip | |
|--------------------------|--------|-------|----------|-------|----------------|-------|-----------|-------|
| | CPI-U | CPI-W | Forecast | Error | Forecast | Error | Forecast | Error |
| 1976-1977 | 6.1 | 6.1 | 7.1 | 1.0 | 6.1 | 0 | a | a |
| 1977-1978 | 7.0 | 7.0 | 4.9 | -2.1 | 5.2 | -1.8 | a | a |
| 1978-1979 | 9.4 | 9.5 | 5.8 | -3.7 | 6.0 | -3.5 | a | a |
| 1979-1980 | 12.4 | 12.5 | 8.1 | -4.3 | 7.4 | -5.0 | a | a |
| 1980-1981 | 11.9 | 11.9 | 10.1 | -1.8 | 10.5 | -1.4 | a | a |
| 1981-1982 | 8.2 | 8.1 | 10.4 | 2.1 | 9.7 | 1.6 | a | a |
| 1982-1983 | 4.6 | 4.5 | 7.2 | 2.6 | 6.6 | 2.1 | 7.2 | 2.6 |
| 1983-1984 | 3.8 | 3.3 | 4.7 | 1.0 | 4.7 | 1.5 | 4.9 | 1.1 |
| 1984-1985 | 3.9 | 3.5 | 4.9 | 1.0 | 4.5 | 1.0 | 5.2 | 1.3 |
| 1985-1986 | 2.7 | 2.5 | 4.1 | 1.4 | 4.2 | 1.7 | 4.3 | 1.6 |
| 1986-1987 | 2.8 | 2.6 | 3.8 | 1.2 | 3.8 | 1.2 | 3.8 | 1.0 |
| 1987-1988 | 3.9 | 3.8 | 3.9 | 0.1 | 3.3 | -0.5 | 3.6 | -0.2 |
| 1988-1989 | 4.4 | 4.4 | 4.7 | 0.3 | 4.2 | -0.2 | 4.3 | -0.1 |
| 1989-1990 | 5.1 | 5.0 | 4.9 | -0.1 | 3.7 | -1.3 | 4.7 | -0.4 |
| 1990-1991 | 4.8 | 4.6 | 4.1 | -0.7 | 3.9 | -0.7 | 4.1 | -0.7 |
| 1991-1992 | 3.6 | 3.5 | 4.2 | 0.6 | 4.6 | 1.1 | 4.4 | 0.8 |
| 1992-1993 | 3.0 | 2.9 | 3.4 | 0.4 | 3.1 | 0.1 | 3.5 | 0.5 |
| 1993-1994 | 2.8 | 2.7 | 2.8 | 0.1 | 2.8 | 0.1 | 3.3 | 0.6 |
| 1994-1995 | 2.7 | 2.7 | 2.8 | 0.2 | 3.0 | 0.3 | 3.0 | 0.4 |
| 1995-1996 | 2.9 | 2.9 | 3.2 | 0.4 | 3.1 | 0.3 | 3.4 | 0.6 |
| Statistics for 1976-1995 | | | | | | | | |
| Mean error | * | * | * | 0 | * | -0.2 | * | * |
| Mean absolute error | * | * | * | 1.2 | * | 1.3 | * | * |
| Root mean square error | * | * | * | 1.7 | * | 1.7 | * | * |
| Statistics for 1982-1995 | | | | | | | | |
| Mean error | * | * | * | 0.6 | * | 0.5 | * | 0.6 |
| Mean absolute error | * | * | * | 0.7 | * | 0.9 | * | 0.8 |
| Root mean square error | * | * | * | 1.0 | * | 1.1 | * | 1.0 |

SOURCES: Congressional Budget Office; Office of Management and Budget; Capitol Publications, Inc., *Blue Chip Economic Indicators*; Department of Labor, Bureau of Labor Statistics.

NOTES: Values are for the average annual growth of the consumer price index (CPI) over the two-year period. Before 1978, the Bureau of Labor Statistics published only one consumer price index series, now known as the CPI-W (the price index for urban wage earners and clerical workers). In January 1978, however, the bureau began to publish a second, broader consumer price index series, the CPI-U (the price index for all urban consumers). For most years since 1979, CBO forecast the CPI-U; from 1986 through 1989, however, CBO forecast the CPI-W. The Administration forecast the CPI-W until 1992, when it switched to the CPI-U. *Blue Chip* forecast the CPI-U for the entire period. The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.

Table A-3.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Interest Rates on Three-Month Treasury Bills (By calendar year, in percent)

| | Actual | | CBO | | Administration | | Blue Chip | |
|--------------------------|-----------|------------------|----------|-------|----------------|-------|-----------|-------|
| | New Issue | Secondary Market | Forecast | Error | Forecast | Error | Forecast | Error |
| 1976-1977 | 5.1 | 5.1 | 6.2 | 1.1 | 5.5 | 0.4 | a | a |
| 1977-1978 | 6.2 | 6.2 | 6.4 | 0.2 | 4.4 | -1.8 | a | a |
| 1978-1979 | 8.6 | 8.6 | 6.0 | -2.6 | 6.1 | -2.5 | a | a |
| 1979-1980 | 10.8 | 10.7 | 8.3 | -2.4 | 8.2 | -2.6 | a | a |
| 1980-1981 | 12.8 | 12.7 | 9.5 | -3.2 | 9.7 | -3.1 | a | a |
| 1981-1982 | 12.4 | 12.3 | 13.2 | 0.9 | 10.0 | -2.4 | a | a |
| 1982-1983 | 9.7 | 9.6 | 12.6 | 3.0 | 11.1 | 1.4 | 11.3 | 1.6 |
| 1983-1984 | 9.1 | 9.1 | 7.1 | -2.0 | 7.9 | -1.1 | 7.9 | -1.2 |
| 1984-1985 | 8.5 | 8.5 | 8.7 | 0.3 | 8.1 | -0.4 | 9.1 | 0.5 |
| 1985-1986 | 6.7 | 6.7 | 8.5 | 1.8 | 8.0 | 1.3 | 8.5 | 1.8 |
| 1986-1987 | 5.9 | 5.9 | 6.7 | 0.9 | 6.9 | 1.0 | 7.1 | 1.2 |
| 1987-1988 | 6.2 | 6.2 | 5.6 | -0.6 | 5.5 | -0.7 | 5.7 | -0.5 |
| 1988-1989 | 7.4 | 7.4 | 6.4 | -0.9 | 5.2 | -2.1 | 6.1 | -1.2 |
| 1989-1990 | 7.8 | 7.8 | 7.5 | -0.3 | 5.9 | -1.9 | 7.5 | -0.3 |
| 1990-1991 | 6.5 | 6.4 | 7.0 | 0.6 | 6.0 | -0.4 | 7.1 | 0.7 |
| 1991-1992 | 4.4 | 4.4 | 6.8 | 2.4 | 6.2 | 1.8 | 6.4 | 2.0 |
| 1992-1993 | 3.2 | 3.2 | 4.7 | 1.5 | 4.5 | 1.3 | 4.6 | 1.4 |
| 1993-1994 | 3.6 | 3.6 | 3.4 | -0.2 | 3.4 | -0.2 | 3.8 | 0.2 |
| 1994-1995 | 4.9 | 4.9 | 3.9 | -1.0 | 3.6 | -1.3 | 3.6 | -1.3 |
| 1995-1996 | 5.3 | 5.2 | 5.9 | 0.7 | 5.7 | 0.4 | 6.1 | 0.9 |
| Statistics for 1976-1995 | | | | | | | | |
| Mean error | * | * | * | 0 | * | -0.7 | * | * |
| Mean absolute error | * | * | * | 1.3 | * | 1.4 | * | * |
| Root mean square error | * | * | * | 1.6 | * | 1.6 | * | * |
| Statistics for 1982-1995 | | | | | | | | |
| Mean error | * | * | * | 0.4 | * | -0.1 | * | 0.4 |
| Mean absolute error | * | * | * | 1.2 | * | 1.1 | * | 1.1 |
| Root mean square error | * | * | * | 1.4 | * | 1.2 | * | 1.2 |

SOURCES: Congressional Budget Office; Office of Management and Budget; Capitol Publications, Inc., *Blue Chip Economic Indicators*; Federal Reserve Board.

NOTES: Values are for the geometric averages of the three-month Treasury bill rates for the two-year period. The actual values are published by the Federal Reserve Board as the rate on new issues (reported on a bank-discount basis) and the secondary-market rate. CBO forecast the secondary-market rate; the Administration forecast the new-issue rate. *Blue Chip* alternated between the two rates, forecasting the new-issue rate from 1982 to 1985, the secondary-market rate from 1986 to 1991, and the new-issue rate again beginning in 1992. The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.

Table A-4.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Long-Term Interest Rates (By calendar year, in percent)

| | Actual | | CBO | | Administration | | Blue Chip | |
|--------------------------|--------------|--------------------|----------|-------|----------------|-------|-----------|-------|
| | 10-Year Note | Corporate Aaa Bond | Forecast | Error | Forecast | Error | Forecast | Error |
| 1984-1985 | 11.5 | 12.0 | 11.9 | -0.1 | 9.7 | -1.8 | 12.2 | 0.2 |
| 1985-1986 | 9.1 | 10.2 | 11.5 | 1.3 | 10.6 | 1.5 | 11.8 | 1.7 |
| 1986-1987 | 8.0 | 9.2 | 8.9 | 0.9 | 8.7 | 0.7 | 9.9 | 0.8 |
| 1987-1988 | 8.6 | 9.5 | 7.2 | -1.4 | 6.6 | -2.0 | 8.7 | -0.8 |
| 1988-1989 | 8.7 | 9.5 | 9.4 | 0.7 | 7.7 | -1.0 | 9.8 | 0.3 |
| 1989-1990 | 8.5 | 9.3 | 9.1 | 0.6 | 7.7 | -0.8 | 9.5 | 0.3 |
| 1990-1991 | 8.2 | 9.0 | 7.7 | -0.5 | 7.2 | -1.0 | 8.7 | -0.3 |
| 1991-1992 | 7.4 | 8.5 | 7.8 | 0.4 | 7.3 | -0.1 | 8.7 | 0.3 |
| 1992-1993 | 6.4 | 7.7 | 7.1 | 0.7 | 6.9 | 0.5 | 8.4 | 0.7 |
| 1993-1994 | 6.5 | 7.6 | 6.6 | 0.2 | 6.6 | 0.2 | 8.2 | 0.6 |
| 1994-1995 | 6.8 | 7.8 | 5.9 | -0.9 | 5.8 | -1.0 | 7.1 | -0.7 |
| 1995-1996 | 6.5 | 7.5 | 7.3 | 0.8 | 7.5 | 1.0 | 8.6 | 1.1 |
| Statistics for 1984-1995 | | | | | | | | |
| Mean error | * | * | * | 0.2 | * | -0.3 | * | 0.3 |
| Mean absolute error | * | * | * | 0.7 | * | 1.0 | * | 0.6 |
| Root mean square error | * | * | * | 0.8 | * | 1.1 | * | 0.8 |

SOURCES: Congressional Budget Office; Office of Management and Budget; Capitol Publications, Inc., *Blue Chip Economic Indicators*; Federal Reserve Board.

NOTES: Actual values are for the geometric averages of the 10-year Treasury note rates or Moody's corporate Aaa bond rates for the two-year period as reported by the Federal Reserve Board. CBO forecast the 10-year Treasury note rate in all years except 1984 and 1985. The Administration forecast the 10-year note rate, but *Blue Chip* forecast the corporate Aaa bond rate. Data are only available beginning in 1984 because not all of the forecasters published long-term rate projections before then. The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

Table A-5.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Real Interest Rates on Three-Month Treasury Bills (By calendar year, in percent)

| | New Issue | | Actual Secondary Market | | CBO | | Administration | | Blue Chip | |
|--------------------------|-----------|-------|----------------------------|-------|----------|-------|----------------|-------|-----------|-------|
| | CPI-U | CPI-W | CPI-U | CPI-W | Forecast | Error | Forecast | Error | Forecast | Error |
| 1976-1977 | -0.9 | -0.9 | -0.9 | -0.9 | -0.8 | 0.1 | -0.6 | 0.3 | a | a |
| 1977-1978 | -0.8 | -0.7 | -0.8 | -0.7 | 1.5 | 2.2 | -0.8 | -0.1 | a | a |
| 1978-1979 | -0.7 | -0.8 | -0.7 | -0.8 | 0.2 | 1.0 | 0.1 | 0.9 | a | a |
| 1979-1980 | -1.4 | -1.5 | -1.4 | -1.5 | 0.2 | 1.7 | 0.7 | 2.2 | a | a |
| 1980-1981 | 0.8 | 0.9 | 0.7 | 0.8 | -0.5 | -1.2 | -0.7 | -1.6 | a | a |
| 1981-1982 | 3.8 | 4.0 | 3.7 | 3.9 | 2.6 | -1.2 | 0.3 | -3.7 | a | a |
| 1982-1983 | 4.8 | 4.9 | 4.7 | 4.9 | 5.0 | 0.3 | 4.2 | -0.8 | 3.8 | -1.0 |
| 1983-1984 | 5.1 | 5.7 | 5.1 | 5.6 | 2.2 | -2.9 | 3.1 | -2.6 | 2.9 | -2.3 |
| 1984-1985 | 4.4 | 4.9 | 4.4 | 4.8 | 3.6 | -0.8 | 3.4 | -1.4 | 3.6 | -0.8 |
| 1985-1986 | 3.9 | 4.1 | 3.9 | 4.1 | 4.2 | 0.3 | 3.6 | -0.4 | 4.0 | 0.1 |
| 1986-1987 | 3.0 | 3.2 | 3.0 | 3.2 | 2.8 | -0.4 | 3.0 | -0.3 | 3.2 | 0.2 |
| 1987-1988 | 2.3 | 2.4 | 2.3 | 2.3 | 1.7 | -0.6 | 2.1 | -0.2 | 2.0 | -0.3 |
| 1988-1989 | 2.8 | 2.9 | 2.8 | 2.9 | 1.7 | -1.2 | 1.0 | -1.9 | 1.8 | -1.1 |
| 1989-1990 | 2.6 | 2.6 | 2.6 | 2.6 | 2.5 | -0.2 | 2.1 | -0.6 | 2.7 | 0.2 |
| 1990-1991 | 1.6 | 1.7 | 1.5 | 1.7 | 2.8 | 1.2 | 2.0 | 0.3 | 2.9 | 1.3 |
| 1991-1992 | 0.8 | 0.9 | 0.7 | 0.9 | 2.5 | 1.8 | 1.5 | 0.6 | 1.9 | 1.2 |
| 1992-1993 | 0.2 | 0.4 | 0.2 | 0.3 | 1.3 | 1.0 | 1.3 | 1.1 | 1.1 | 0.8 |
| 1993-1994 | 0.8 | 0.9 | 0.8 | 0.9 | 0.5 | -0.3 | 0.6 | -0.3 | 0.5 | -0.4 |
| 1994-1995 | 2.1 | 2.2 | 2.1 | 2.1 | 1.0 | -1.1 | 0.6 | -1.6 | 0.5 | -1.6 |
| 1995-1996 | 2.3 | 2.3 | 2.3 | 2.3 | 2.6 | 0.3 | 2.5 | 0.1 | 2.6 | 0.3 |
| Statistics for 1976-1995 | | | | | | | | | | |
| Mean error | * | * | * | * | * | 0 | * | -0.5 | * | * |
| Mean absolute error | * | * | * | * | * | 1.0 | * | 1.0 | * | * |
| Root mean square error | * | * | * | * | * | 1.2 | * | 1.4 | * | * |
| Statistics for 1982-1995 | | | | | | | | | | |
| Mean error | * | * | * | * | * | -0.2 | * | -0.6 | * | -0.2 |
| Mean absolute error | * | * | * | * | * | 0.9 | * | 0.9 | * | 0.8 |
| Root mean square error | * | * | * | * | * | 1.1 | * | 1.1 | * | 1.0 |

SOURCES: Congressional Budget Office; Office of Management and Budget; Capitol Publications, Inc., *Blue Chip Economic Indicators*; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

NOTES: Values are for the appropriate three-month Treasury bill rate discounted by the respective forecast for inflation as measured by the change in the consumer price index. The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate.

CPI-U = consumer price index for all urban consumers; CPI-W = consumer price index for urban wage earners and clerical workers; * = not applicable.

a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.

Table A-6.
Comparison of CBO and Administration Projections of the Two-Year Change in Wages and Salary Distributions Plus Book Profits as a Share of Output (By calendar year, in percent)

| | Actual | CBO | | Administration | |
|--------------------------|--------|----------|-------|----------------|-------|
| | | Forecast | Error | Forecast | Error |
| 1980-1981 | -3.1 | -0.6 | 2.5 | -1.3 | 1.8 |
| 1981-1982 | -3.3 | -2.6 | 0.7 | -1.2 | 2.1 |
| 1982-1983 | -1.9 | -1.8 | 0.2 | -1.7 | 0.3 |
| 1983-1984 | -0.7 | 0 | 0.7 | -1.0 | -0.3 |
| 1984-1985 | -0.5 | -0.2 | 0.3 | -0.2 | 0.4 |
| 1985-1986 | -0.6 | -0.6 | 0 | -0.8 | -0.2 |
| 1986-1987 | 1.6 | 1.0 | -0.6 | 0.8 | -0.8 |
| 1987-1988 | 2.7 | 0.9 | -1.8 | 1.4 | -1.3 |
| 1988-1989 | -0.6 | 0.6 | 1.2 | 0.4 | 0.9 |
| 1989-1990 | -1.2 | 0.4 | 1.6 | 0.7 | 1.9 |
| 1990-1991 | -0.1 | 0.7 | 0.7 | 1.4 | 1.5 |
| 1991-1992 | 0 | 0.1 | 0.1 | -0.1 | 0 |
| 1992-1993 | 0.1 | 1.0 | 0.9 | 1.4 | 1.3 |
| 1993-1994 | 0 | 0.5 | 0.5 | 0.5 | 0.5 |
| 1994-1995 | 1.6 | 0.2 | -1.4 | 0.4 | -1.2 |
| 1995-1996 | 2.1 | -0.3 | -2.4 | -0.6 | -2.7 |
| Statistics for 1980-1995 | | | | | |
| Mean error | * | * | 0.2 | * | 0.3 |
| Mean absolute error | * | * | 1.0 | * | 1.1 |
| Root mean square error | * | * | 1.2 | * | 1.3 |

SOURCES: Congressional Budget Office; Office of Management and Budget; Department of Commerce, Bureau of Economic Analysis.

NOTES: The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate. For the forecasts made between 1980 and 1991, gross national product was used in calculating the shares; for the forecasts made in 1992 and later, gross domestic product was used.

* = not applicable.

Table A-7.
Comparison of CBO and Administration Projections of Five-Year Average Growth Rates
for Real Output (By calendar year, in percent)

| | Actual | | | Chain-Type Annual- Weighted Index | CBO | | Administration | | Blue Chip | |
|-----------------------------|-----------------|-----------------|-----------------|--|------------|-------|----------------|-------|------------|-------|
| | 1972 Dollars | 1982 Dollars | 1987 Dollars | | Projection | Error | Projection | Error | Projection | Error |
| GNP | | | | | | | | | | |
| 1976-1980 | 4.2 | 3.4 | 3.3 | 3.7 | 5.7 | 2.0 | 6.2 | 2.5 | a | a |
| 1977-1981 | 3.1 | 2.8 | 2.6 | 3.0 | 5.3 | 2.3 | 5.1 | 2.1 | a | a |
| 1978-1982 | 1.6 | 1.4 | 1.2 | 1.6 | 4.8 | 3.2 | 4.8 | 3.2 | a | a |
| 1979-1983 | 1.3 | 1.0 | 1.1 | 1.3 | 3.8 | 2.5 | 3.8 | 2.5 | 3.1 | 1.8 |
| 1980-1984 | 2.1 | 1.9 | 1.7 | 2.0 | 2.4 | 0.4 | 3.0 | 1.0 | 2.5 | 0.5 |
| 1981-1985 | b | 2.6 | 2.4 | 2.7 | 2.8 | 0 | 3.8 | 1.1 | 3.0 | 0.3 |
| 1982-1986 | b | 2.7 | 2.6 | 2.9 | 3.0 | 0.1 | 3.9 | 1.0 | 2.7 | -0.1 |
| 1983-1987 | b | 4.0 | 3.7 | 3.9 | 3.6 | -0.3 | 3.5 | -0.5 | 3.5 | -0.5 |
| 1984-1988 | b | 4.1 | 3.7 | 3.9 | 4.0 | 0 | 4.3 | 0.3 | 3.5 | -0.5 |
| 1985-1989 | b | 3.3 | 3.1 | 3.2 | 3.4 | 0.1 | 4.0 | 0.7 | 3.4 | 0.1 |
| 1986-1990 | b | 2.8 | 2.7 | 2.9 | 3.3 | 0.5 | 3.8 | 0.9 | 3.1 | 0.3 |
| 1987-1991 | b | c | 2.0 | 2.1 | 2.9 | 0.8 | 3.5 | 1.4 | 2.7 | 0.6 |
| 1988-1992 | b | c | 1.9 | 2.0 | 2.6 | 0.5 | 3.2 | 1.2 | 2.5 | 0.5 |
| 1989-1993 | b | c | 1.7 | 1.7 | 2.3 | 0.6 | 3.2 | 1.5 | 2.6 | 0.8 |
| 1990-1994 | b | c | 1.9 | 1.7 | 2.3 | 0.6 | 3.0 | 1.2 | 2.4 | 0.7 |
| 1991-1995 | b | c | d | 1.9 | 2.3 | 0.5 | 2.5 | 0.7 | 2.4 | 0.5 |
| GDP* | | | | | | | | | | |
| 1992-1996 | b | c | d | 2.6 | 2.6 | -0.1 | 2.7 | 0 | 2.0 | -0.6 |
| Statistics for 1976-1992 | | | | | | | | | | |
| Mean error | * | * | * | * | * | 0.8 | * | 1.2 | * | * |
| Mean absolute error | * | * | * | * | * | 0.9 | * | 1.3 | * | * |
| Root mean square error | * | * | * | * | * | 1.3 | * | 1.5 | * | * |
| Statistics for 1979-1992 | | | | | | | | | | |
| Mean error | * | * | * | * | * | 0.4 | * | 0.9 | * | 0.3 |
| Mean absolute error | * | * | * | * | * | 0.5 | * | 1.0 | * | 0.6 |
| Root mean square error | * | * | * | * | * | 0.8 | * | 1.2 | * | 0.7 |

SOURCES: Congressional Budget Office; Office of Management and Budget; Capitol Publications, Inc., *Blue Chip Economic Indicators*; Department of Commerce, Bureau of Economic Analysis.

NOTES: Actual values are for the five-year growth rates for real gross national product (GNP) and gross domestic product (GDP) last reported by the Bureau of Economic Analysis, not the first reported values. Projected values are for the average growth of real GNP or GDP over the five-year period. The majority of the projections were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are projected values minus actual values; thus, a positive error is an overestimate. The chain-type annual-weighted index of actual GNP or GDP was used in calculating the errors.

* = not applicable.

- a. Five-year forecasts for the *Blue Chip* consensus were not available until 1979.
- b. Data for 1972-dollar GNP are available only through the third quarter of 1985.
- c. Data for 1982-dollar GNP are available only through the third quarter of 1991.
- d. Data for 1987-dollar GNP and GDP are available only through the second and third quarters, respectively, of 1995.
- e. With the 1992 benchmark revision, GDP replaced GNP as the central measure of national output.

Changes in Calculating the Consumer Price Indexes

The Bureau of Labor Statistics (BLS), the agency that compiles the consumer price indexes (CPIs), has instituted a number of changes in recent years in the way that it calculates price indexes. Moreover, it has announced additional changes for 1998 and 1999. Although the methods used to construct the CPIs have been modified many times over the long history of the series, the changes in the 1995-1999 period are particularly important. The BLS estimates that, by early 1997, the changes made from 1995 through early 1997 probably reduced the measured increase in inflation by 0.2 to 0.3 percentage points a year compared with what the former methods would have generated. The Congressional Budget Office (CBO) estimates that the changes slated for the next two years will reduce CPI growth by approximately 0.4 percentage points more by the end of 1999.

The changes that have been embodied in the CPI since 1994 modified the measurement of price changes for a wide number of categories. In January 1995, the modifications corrected an upward bias in the owners' equivalent rent measure and a downward bias in the measure of nonowner rent, made a better link between prices of generic drugs and prices of corresponding drugs that have gone off patent, and changed the method of introducing new food items into the sample (in a process called "sample rotation") to eliminate an upward bias. In mid-1996, the method of introducing new food items was extended to the sample rotation of all other nonshelter categories of items in the CPIs. Another change, which removed a small upward bias, was made to the way in which new items are brought

into the sample when the existing item can no longer be priced. Then, in January 1997, the measure of hospital prices was changed to try to better reflect the actual services that are provided and the prices of transactions. That change also probably reduced the measured growth of prices.

The changes to be introduced in 1998 and 1999 will further reduce CPI growth.¹ During 1998, the BLS will begin to use new weights for calculating the aggregate price indexes. The current CPIs are calculated using weights based on patterns of consumer expenditures in the 1982-1984 period. Starting in 1998, the weights will reflect patterns of expenditures from 1993 through 1995. That rebenchmarking has been done about every 10 years in recent decades—the last rebenchmarking was done in 1987. Shifting to more current weights tends to reduce the growth of the aggregate price index because current weights put more emphasis on items whose prices have been growing less rapidly in recent years. The CBO economic forecast detailed in Chapter 1 assumes that the 1998 rebenchmarking will initially reduce CPI growth by 0.15 percentage points.

In January 1998, the BLS will also adopt a new procedure for measuring prices for personal computers and peripheral equipment that will reduce the growth of the CPI. The procedure, called a hedonic model, has been used in the producer price index (PPI) since 1991,

1. The 1998 and 1999 changes are discussed in detail in Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review* (December 1996).

and it provides a way to estimate the value of changes in quality.

Because of rapid improvements in the quality of computers and peripheral equipment, the PPI for electronic computers has fallen dramatically, particularly last year when it plunged about 30 percent. The CPI for information-processing equipment fell only about 10 percent last year, but the current CPI does not use the hedonic model for computers (although hedonic models are used for some other CPI categories). The BLS has not estimated the effect of using the hedonic model for computer pricing on the growth of the CPI. However, the combined effect of a new, larger weighting for computers (because of the rebenchmarking) and the new method of measuring prices is likely to be significant. Whereas the old category for information-processing equipment depressed overall CPI growth last year by about 0.01 percentage point, the new category for personal computers and peripheral equipment—if it had been in place—would have depressed overall CPI growth by about 0.06 percentage points. Of course, if computer prices do not continue to fall as fast as they have in recent years, the effect will be smaller in the future.

In 1999, two changes in CPI methodology will be instituted. The weighting procedure for compiling many of the subaggregates of price change will switch from a simple arithmetic weighting to a geometric weighting. Under certain assumptions about how consumers change their consumption patterns in response to changes in relative prices, the geometric weighting results in a more accurate approximation of a cost-of-living index. The BLS has estimated that the switch will probably reduce CPI growth by up to 0.25 percentage points a year depending on how many subaggregates the new weighting scheme is used for. CBO's economic forecast assumes the change will reduce CPI growth by 0.14 percentage points a year.

The second change in 1999 will affect the rotation of the sample—in other words, the way in which new stores and items are periodically brought into the sample of items selected for price quotes. Like rebenchmarking, rotation updates the sample to reflect current patterns of expenditures. But it affects the outlets and items selected rather than the weighting, and it is an ongoing process that can affect the CPI every year rather than just every 10 years.

Sample rotation now occurs in one-fifth of the geographic areas every year, and a significant lag exists between the time of the survey used to select the outlets and the actual introduction of those outlets in the sample. Therefore, new goods are not fully captured in the CPI nationwide until long after they have been introduced. Starting in 1999, sample rotation will be done according to the category of expenditure rather than geographic area. In addition, the time between the survey and the actual introduction of the outlets will be sharply reduced, perhaps even cut in half. Rotating the sample by category of expenditure will also permit the BLS to focus its rotation on those categories that are undergoing more rapid change, and thereby permit the CPI to reflect consumer spending on future new goods, such as high-definition televisions, in a more timely way.

The Bureau of Labor Statistics has not estimated the effect of that rotation change on the growth of the CPI, but the change will probably reduce CPI growth. The prices of new goods often decline during the first five or 10 years that the goods are on the market as the growing market permits economies of scale and as competitors increase. Therefore, the earlier that the CPI captures new goods, the more likely that CPI growth will be dampened. The effect of that change in methodology on the CPI depends on how much faster new goods are captured, the actual pricing patterns of new goods in the future, and how many important new goods are introduced. The change in methodology could reduce CPI growth by as much as 0.1 percentage point a year, but estimates of the effect are extremely uncertain.

Clearly, the combined effect of the BLS's changes on the CPI over the 1995-2000 period will be substantial. Taken together, the changes may reduce measured inflation on the order of 0.7 percentage points compared with what would have occurred if no changes in methodology had been made. Therefore, CBO's forecast for CPI inflation in 2000, which is 3 percent, cannot be directly compared with CPI inflation measured using pre-1995 procedures. If CBO had forecast the same CPI concept that was in use in 1994, the forecast for CPI inflation in 2000 would have been higher—presumably by about 0.7 percentage points. The changes that the BLS is making improve the accuracy of the CPIs, but they also complicate the assessment of the change in inflation over recent years and over the next few years.

Sequestration Update Report for Fiscal Year 1998

Sequestration—the cancellation of budgetary resources—is an automatic procedure to control discretionary appropriations and legislative changes in direct (mandatory) spending and receipts.¹ The Congress and the President can avoid a discretionary sequestration by keeping discretionary spending within established statutory limits, and a pay-as-you-go sequestration by making sure that the cumulative effect of legislation dealing with direct spending or receipts is deficit neutral in each fiscal year.

Federal law requires the Congressional Budget Office (CBO) each year to issue a sequestration preview report five days before the President submits a budget, a sequestration update report on August 15, and a final sequestration report 10 days after a session of Congress ends. Each sequestration report must contain estimates of the following items:

- o The current limits on discretionary spending and any adjustments to them; and
- o The amount by which legislation enacted since the Budget Enforcement Act of 1990 that affects direct spending or receipts has increased or decreased the deficit, as well as the amount of any required pay-as-you-go sequestration.

1. Current sequestration procedures were established by the Budget Enforcement Act of 1990, which amended the Balanced Budget and Emergency Deficit Control Act of 1985 and the Congressional Budget and Impoundment Control Act of 1974. The Omnibus Budget Reconciliation Act of 1993 extended the application of those procedures through 1998. The Budget Enforcement Act of 1997 further extended them, with modifications, through 2002 (or in some cases 2006).

The final sequestration report must also include the amount of discretionary new budget authority for that fiscal year, estimated total outlays, and the amount of any required discretionary sequestration.

This update report to the Congress and the Office of Management and Budget (OMB) provides the required information.

Discretionary Sequestration Report

The Budget Enforcement Act of 1990 (BEA-90) established discretionary spending limits for fiscal years 1991 through 1995 and provided for across-the-board cuts—known as sequestration—should annual appropriations breach those limits. BEA-90 also included specific instructions for adjusting those spending caps. The Omnibus Budget Reconciliation Act of 1993 (OBRA-93) set limits on total discretionary budget authority and outlays for fiscal years 1996 through 1998 and extended the existing enforcement procedures, including the cap adjustments, for that period. Spending from the Violent Crime Reduction Trust Fund (VCRTF) was excluded from the caps by the Violent Crime Control and Law Enforcement Act of 1994, which created the trust fund. That act established separate limits through 1998 on VCRTF spending and lowered the discretionary caps each year by that amount.

The Budget Enforcement Act of 1997 (BEA-97), title X of the Balanced Budget Act of 1997, sets discretionary spending limits for fiscal years 1997 through 2002 and extends the existing enforcement procedures, but with some modifications. Those modifications create additional categories of discretionary spending that will be subject to sequestration after fiscal year 1997 and redefine the required adjustments to the caps. For fiscal years 1998 and 1999, the law splits discretionary spending into three categories: defense, nondefense, and VCRTF spending. For fiscal year 2000, it combines defense and nondefense spending into a single discretionary category, while retaining the violent crime reduction category. For fiscal years 2001 and 2002, the law folds all three into one discretionary category, so the limits apply to total discretionary spending.

BEA-97 also makes various changes to the instructions for adjusting those spending limits. It subjects the violent crime reduction category to adjustment for the first time (previously, caps on VCRTF spending were immutable). It eliminates the adjustment for differences between earlier estimates of future inflation and more recent estimates, and for technical differences between OMB's and CBO's estimates of enacted budget authority. BEA-97 also reinstates an adjustment for quota payments to the International Monetary Fund and allows the discretionary caps to be raised to cover U.S. payment of arrearages to international organizations (such as the United Nations) and the cost of ensuring compliance with the earned income tax credit. Those new adjustments—like the existing adjustments for emergency appropriations and for spending by the Social Security Administration on continuing-disability reviews—are made after budget authority for the specified purposes has been provided in appropriation acts.

Discretionary Spending Limits for Fiscal Year 1997

The Budget Enforcement Act of 1997 does not change the limits that apply to discretionary budget authority and outlays for 1997. OMB's estimates of those caps are the ones that determine whether enacted appropriations fall within the limits or whether a sequestration is required to eliminate a breach of them (CBO's estimates are merely advisory). Thus, CBO uses the estimates in OMB's most recent sequestration preview report—published with the President's budget in Feb-

ruary—as the starting point for the adjustments it is required to make in this sequestration update report. OMB's limits are identical to the ones that CBO published in January in its preview report. The limits on VCRTF budget authority and outlays do not require any adjustment and are therefore the same as those published in CBO's January preview report.

CBO's new estimates of the discretionary spending limits (shown in Table C-1) differ from the estimates in its preview report solely because of emergency funds made available since OMB issued its preview report. Since February, only one piece of legislation containing emergency appropriations was enacted. That legislation provided emergency appropriations to help victims of natural disasters and to cover the costs of peacekeeping efforts in Bosnia and the Middle East. Those appropriations provide a total of \$7,464 million in budget authority for 1997, which will result in 1997 outlays of \$734 million. The availability of \$30 million of those

Table C-1.
CBO Estimates of Discretionary Spending Limits for Fiscal Year 1997 (In millions of dollars)

| | Budget Authority | Outlays |
|---|------------------|------------|
| General-Purpose Spending Limits in OMB's February Preview Report | 527,036 | 547,060 |
| Adjustments | | |
| Emergency 1997 appropriations enacted since OMB's preview report | 7,464 | 734 |
| Contingent emergency appropriations designated since OMB's preview report | <u>265</u> | <u>210</u> |
| Total | 7,729 | 944 |
| General-Purpose Spending Limits as of August 15, 1997 | 534,765 | 548,004 |
| Violent Crime Reduction Trust Fund Spending Limits | 5,000 | 3,936 |
| Total Discretionary Spending Limits | 539,765 | 551,940 |

SOURCE: Congressional Budget Office.

NOTE: OMB = Office of Management and Budget.

appropriations for the National Park Service is contingent on their release by the President. CBO includes that appropriation in its cap adjustment because no further action by the Congress is necessary to make the funds available.

In addition, CBO has adjusted the 1997 limits on discretionary spending for contingent emergency appropriations that the President released since the publication of OMB's preview report. That adjustment is necessary because CBO starts with the limits in OMB's previous report, and those limits (unlike CBO's) include adjustments only for appropriations that have already been released by the President. Since OMB published its February report, the President has released \$265 million in contingent emergency appropriations, most of which (\$210 million) is for the Low Income Home Energy Assistance Program. Smaller amounts are for spending that is related to severe weather and other disasters. Outlays from those appropriations are expected to total \$210 million this year.

Discretionary Spending Limits for Fiscal Years 1998-2002

The discretionary spending limits that BEA-97 established for fiscal years 1998 through 2002 (shown in Table C-2) are identical to the limits contained in the conference report on the Congressional budget resolution for 1998.² CBO made two adjustments to those limits: one to account for the effects that changes in the 1997 caps will have on outlays in later years, and another to incorporate \$266 million of emergency 1998 budget authority for the nondefense discretionary category that was included in the emergency appropriation bill mentioned above. Also, as the categories of discretionary spending change between now and 2002, CBO has reallocated its adjustments to reflect how the spending would be categorized in a particular year. For example, the emergency appropriation bill included \$1,846 million in additional budget authority for 1997 in the defense category, which will result in outlays of \$1,135 million for 1998, \$224 million for 1999, \$39 million for 2000, and smaller amounts thereafter. The

extra \$39 million in defense outlays for 2000 are included in the \$1,305 million in overall discretionary outlays for 2000 because there will be no separate defense category that year. Overall, total discretionary outlays are expected to hover around \$560 billion a year for the 1998-2002 period.

Pay-As-You-Go Sequestration Report

The Budget Enforcement Act of 1990 established the pay-as-you-go sequestration mechanism to ensure that any legislative changes in direct spending or receipts enacted after that act would not increase the combined deficits of the current fiscal year and the budget year. If legislative changes during a session of Congress did increase that measure of the deficit, a pay-as-you-go (PAYGO) sequestration would be required at the end of the session. Under the sequestration, mandatory programs (other than those specifically exempt) would be cut by enough to eliminate the increase. The PAYGO provisions of BEA-90 applied through fiscal year 1995, and OBRA-93 extended them through 1998.

The Budget Enforcement Act of 1997 extends PAYGO discipline to legislation enacted through 2002, but applies the sequestration procedure through 2006 to eliminate any deficit increase that might result from legislation enacted before 2003. Previously, PAYGO only ensured that legislation enacted before the end of fiscal year 1998 would not increase the deficit through that year. Now, the PAYGO scorecard must take into account the effects in the current year, the budget year, and the following four years of legislation enacted before the end of 2002. In other words, although legislation enacted between 2003 and 2006 is not subject to PAYGO discipline, the estimated effects of legislation enacted before then will be recorded on the PAYGO scorecard for any year through 2006 covered by the estimate. If a cumulative increase in the deficit is projected for any of those years, it will trigger a sequestration in that year.

The second PAYGO change that BEA-97 makes is to include the current year's deficit effects in the sequestration calculation only to the extent that they were not included in OMB's final sequestration report for that

2. The limits for 1998 differ, however, from the ones in OMB's February preview report. The limit for budget authority set by BEA-97 is \$6,923 million lower than OMB's figure, and the outlay limit is \$6,863 million higher.

Table C-2.
CBO Estimates of Discretionary Spending Limits for Fiscal Years 1998-2002 (In millions of dollars)

| | 1998 | | 1999 | | 2000 | | 2001 | | 2002 | |
|--|---------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|---------------------|---------|
| | Budget Authority | Outlays | Budget Authority | Outlays | Budget Authority | Outlays | Budget Authority | Outlays | Budget Authority | Outlays |
| Total Limits on Discretionary Spending in BEA-97 | 526,857 | 553,268 | 532,999 | 559,321 | 537,193 | 564,265 | 542,032 | 564,396 | 551,074 | 560,799 |
| Defense Discretionary Category ^a | | | | | | | | | | |
| Spending limits in BEA-97 | 269,000 | 266,823 | 271,500 | 266,518 | * | * | * | * | * | * |
| Adjustment (Emergency 1997 appropriations enacted since OMB's preview report) | 0 | 1,135 | 0 | 224 | * | * | * | * | * | * |
| Spending limits as of August 15, 1997 | 269,000 | 267,958 | 271,500 | 266,742 | * | * | * | * | * | * |
| Nondefense Discretionary Category ^a | | | | | | | | | | |
| Spending limits in BEA-97 | 252,357 | 282,853 | 255,699 | 287,850 | * | * | * | * | * | * |
| Adjustments | | | | | | | | | | |
| Emergency 1997 appro- priations enacted since OMB's preview report | 266 | 1,140 | 0 | 1,508 | * | * | * | * | * | * |
| Contingent emergency appropriations designated since OMB's preview report | 0 | 45 | 0 | 7 | * | * | * | * | * | * |
| Spending limits as of August 15, 1997 | 252,623 | 284,038 | 255,699 | 289,365 | * | * | * | * | * | * |
| Violent Crime Reduction Category ^b | | | | | | | | | | |
| Spending limits in BEA-97 | 5,500 | 3,592 | 5,800 | 4,953 | 4,500 | 5,554 | * | * | * | * |
| Adjustments | 0 | 0 | 0 | 0 | 0 | 0 | * | * | * | * |
| Spending limits as of August 15, 1997 | 5,500 | 3,592 | 5,800 | 4,953 | 4,500 | 5,554 | * | * | * | * |
| Overall Discretionary Category ^c | | | | | | | | | | |
| Spending limits in BEA-97 | * | * | * | * | 532,693 | 558,711 | 542,032 | 564,396 | 551,074 | 560,799 |
| Adjustments | | | | | | | | | | |
| Emergency 1997 appro- priations enacted since OMB's preview report | * | * | * | * | 0 | 1,305 | 0 | 941 | 0 | 526 |
| Contingent emergency appropriations designated since OMB's preview report | * | * | * | * | 0 | 2 | 0 | 2 | 0 | 1 |
| Spending limits as of August 15, 1997 | * | * | * | * | 532,693 | 560,018 | 542,032 | 565,339 | 551,074 | 561,326 |
| Total Limits on Discretionary Spending as of August 15, 1997 | 527,123 | 555,588 | 532,999 | 561,060 | 537,193 | 565,572 | 542,032 | 565,339 | 551,074 | 561,326 |

SOURCE: Congressional Budget Office.

NOTE: BEA-97 = Budget Enforcement Act of 1997; OMB = Office of Management and Budget; * = not applicable.

a. This category is folded into the overall discretionary category after fiscal year 1999.

b. This category is folded into the overall discretionary category after fiscal year 2000.

c. This category comprises defense and nondefense spending in fiscal year 2000, plus violent crime reduction spending in 2001 and 2002.

year. Previous law included the entire current year's effects, which resulted in double counting. (For example, the impacts in 1996, which were recorded as budget year effects in the final sequestration report for fiscal year 1996, became the current year effects in the following winter's sequestration preview report for fiscal year 1997.) Eliminating that double count means that an increase in mandatory spending or a decrease in receipts during a budget year must be largely offset in that same year by either the provisions of other legislation or the effects of a previous sequestration instead of by current year balances.

Both CBO and OMB are required to estimate the net change in the deficit resulting from direct spending or receipt legislation. As with the discretionary spending limits, however, OMB's estimates determine whether a sequestration is necessary. CBO has therefore adopted the estimates of changes in the deficit from OMB's February preview report as the starting point for this report. In February, OMB estimated that changes in direct spending and receipts enacted between the time of the Budget Enforcement Act of 1990 and December 31, 1996, reduced the 1998 deficit by

\$3,466 million. (The Omnibus Consolidated Appropriations Act of 1997 removed the balance for 1997 from the PAYGO scorecard.) That estimate excludes changes resulting from legislation that preceded OBRA-93 (the pay-as-you-go procedures did not apply to those years until OBRA-93 was enacted) and deficit reduction contained in OBRA-93 itself (as required by law).

Legislation enacted since OMB's February report has reduced the 1997 deficit by \$2,730 million and increased the 1998 deficit by \$54 million, according to CBO's estimates. When added to the amounts in OMB's report, the result is a surplus of \$2,730 million for 1997 and \$3,412 million for 1998 (see Table C-3). Those figures include the budget year effect of all legislation on which the Congress completed action before its August recess—except the Balanced Budget and Taxpayer Relief Acts of 1997, which BEA-97 specifically excluded from the PAYGO scorecard. Because BEA-97 also removed any available balance from the scorecard (shown as an adjustment in Table C-3), the Congress will return from its August recess with no PAYGO balances.

Table C-3.
Budgetary Effects of Direct Spending or Receipt Legislation
Enacted Since the Budget Enforcement Act of 1990 (By fiscal year, in millions of dollars)

| Legislation | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|--------|--------|------|------|------|------|
| Total for OMB's February 1997 Preview Report ^a | 0 | -3,466 | 0 | 0 | 0 | 0 |
| Legislation Enacted Since OMB's Preview Report | | | | | | |
| Airport and Airway Trust Fund Tax Reinstatement Act (P.L. 105-2) ^b | -2,730 | 54 | 0 | 0 | 0 | 0 |
| Total | -2,730 | -3,412 | 0 | 0 | 0 | 0 |
| Adjustment Required by the Budget Enforcement Act of 1997 (P.L. 105-33) | 2,730 | 3,412 | 0 | 0 | 0 | 0 |
| Change in the Deficit Since the Budget Enforcement Act of 1990 | 0 | 0 | 0 | 0 | 0 | 0 |

SOURCE: Congressional Budget Office.

NOTES: The following bills affected direct spending or receipts but did not increase or decrease the deficit by as much as \$500,000 in any year through 1998: Oroville-Tonasket Claim Settlement and Conveyance Act (P.L. 105-9); an act to award a Congressional gold medal on behalf of the Congress to Francis Albert Sinatra (P.L. 105-14); an act to authorize the President to award a gold medal on behalf of the Congress to Mother Teresa of Calcutta (P.L. 105-16); an act to amend the Federal Property and Administrative Services Act of 1949 to authorize the donation of surplus federal law enforcement canines (P.L. 105-27); an act to clarify that the protections of the Federal Tort Claims Act apply to members and personnel of the National Gambling Impact Study Commission (P.L. 105-30); an act to waive temporarily the Medicaid enrollment composition rule for the Better Health Plan of Amherst, New York (P.L. 105-31); Taxpayer Browsing Protection Act (P.L. 105-35); an act to amend the Immigration and Nationality Technical Corrections Act of 1994 to eliminate the special transition rule for the issuance of a certificate of citizenship for certain children born outside the United States (P.L. 105-38); Warner Canyon Ski Hill Land Exchange Act of 1997 (P.L. 105-40); International Dolphin Conservation Program Act (H.R. 408); an act for the relief of John Wesley Davis (H.R. 584); Stamp Out Breast Cancer Act (H.R. 1585).

OMB = Office of Management and Budget; P.L. = public law.

a. Section 254 of the Balanced Budget and Emergency Deficit Control Act of 1985, as amended by the Budget Enforcement Act of 1990, calls for a list of all bills enacted since the Budget Enforcement Act that are included in the pay-as-you-go calculation. Because the data in this table assume OMB's estimate of the total change in the deficit resulting from bills enacted through the date of its report, readers are referred to the list of those bills included in Table 6 and Table 7 of the *OMB Final Sequestration Report to the President and Congress for Fiscal Year 1997* (November 15, 1996) and in previous sequestration reports issued by OMB. OMB's February preview report did not contain such a list because no legislation included in the pay-as-you-go calculation was enacted between the publication dates of the final sequestration report and the preview report.

b. Change in receipts.

Major Contributors to the Revenue and Spending Projections

The following Congressional Budget Office analysts prepared the revenue and spending projections in this report:

Revenue Projections

| | |
|---------------------|---|
| Mark Booth | Corporate income taxes, Federal Reserve System earnings, excise taxes |
| Noah Meyerson | Social insurance taxes |
| Sean Schofield | Excise taxes, estate and gift taxes |
| Alyssa Trzeszkowski | Customs duties, miscellaneous receipts, social insurance taxes |
| David Weiner | Individual income taxes |
| Stephanie Weiner | Customs duties, miscellaneous receipts, social insurance taxes |

Spending Projections

Defense, International Affairs, and Veterans' Affairs

| | |
|-------------------|---|
| Valerie Barton | Military retirement, veterans' education |
| Shawn Bishop | Veterans' health care, military health care |
| Kent Christensen | Defense (military construction, base closures) |
| Jeannette Deshong | Defense (Army weapons, mobility forces, personnel) |
| Sunita D'Monte | International affairs (conduct of foreign affairs and information exchange activities), veterans' housing |
| Raymond Hall | Defense (Navy weapons, missile defenses, atomic energy defense) |
| Mary Helen Petrus | Veterans' compensation, pensions |
| Dawn Sauter | Defense (intelligence programs, acquisition reform) |
| JoAnn Vines | Defense (tactical air forces, bombers) |
| Joseph Whitehill | International affairs (development, security, international financial institutions) |

Health

| | |
|-------------------|---|
| Tom Bradley | Medicare Part A, managed care |
| Jeanne De Sa | Medicaid, State Childrens' Health Insurance Program |
| Cynthia Dudzinski | Public Health Service, Medicare |
| Anne Hunt | Public Health Service, Medicare |
| Jennifer Jenson | Public Health Service, Medicare |
| Jeffrey Lemieux | Medicare Part B, federal employee health benefits, national health expenditures |
| Robin Rudowitz | Medicaid, State Childrens' Health Insurance Program |

Human Resources

| | |
|-----------------------|---|
| Sheila Dacey | Child support enforcement, Temporary Assistance to Needy Families |
| Deborah Kalcevic | Education |
| Josh O'Harra | Human resources |
| Justin Latus | Education, foster care, child care |
| Carla Pedone | Housing assistance |
| Dorothy Rosenbaum | Social services, food stamps, child nutrition |
| Kathy Ruffing | Supplemental Security Income, Social Security |
| Christi Hawley Sadoti | Unemployment insurance, training programs |

Natural and Physical Resources

| | |
|-----------------|--|
| Perry Beider | Spectrum auction receipts |
| Gary Brown | Water resources, other natural resources |
| Kim Cawley | Energy, pollution control and abatement |
| Elizabeth Daley | Community and regional development, disaster assistance |
| Clare Doherty | Transportation |
| Rachel Forward | Commerce, spectrum auction receipts, credit unions |
| Mark Grabowicz | Justice, Postal Service |
| Kathleen Gramp | Energy, science and space |
| Victoria Heid | Conservation and land management, Outer Continental Shelf receipts |
| David Hull | Agriculture |
| Craig Jagger | Agriculture |
| James Langley | Agriculture |
| Kristen Layman | Transportation |
| Mary Maginniss | Deposit insurance, legislative branch |
| Karen McVey | Transportation |
| Susanne Mehlman | Justice, Federal Housing Administration, mortgage guarantees |
| David Moore | Spectrum auction receipts |
| Deborah Reis | Recreation, water transportation |
| John Righter | General government |

Other

| | |
|----------------|---------------------|
| Janet Airis | Appropriation bills |
| Edward Blau | Authorization bills |
| Jodi Capps | Appropriation bills |
| Betty Embrey | Appropriation bills |
| Kenneth Farris | Computer support |

| | |
|--------------------|---|
| Mary Froehlich | Computer support |
| Vernon Hammett | Computer support |
| Sandra Hoffman | Computer support |
| Jeffrey Holland | Net interest on the public debt |
| Daniel Kowalski | Credit programs, other interest |
| Catherine Mallison | Appropriation bills |
| Robert Sempsey | Appropriation bills |
| Jennifer Winkler | National income and product accounts, civilian agency pay |